

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ZAXCOM, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 23-1245-JFM
	)	
RODE MICROPHONES, LLC AND	)	
FREEDMAN ELECTRONICS PTY LTD.,	)	
	)	
Defendants.	)	

**DEFENDANTS RØDE MICROPHONES, LLC. AND FREEDMAN ELECTRONICS
PTY LTD.'S MOTION TO STAY PROCEEDINGS**

Defendants Rode Microphones, LLC and Freedman Electronics Pty Ltd. respectfully move the Court to stay all proceedings of this case pending the result of IPR2025-00230, IPR2025-00231, IPR2025-00232, and IPR2025-00557 before the Patent Trial and Appeal Board (“PTAB”) within the United States Patent and Trademark Office, including any appeals therefrom from Final Written Decisions of the PTAB. The grounds for this motion are more fully set forth in the accompanying brief and Declaration of Michael A. Fisher. Pursuant to D. Del. LR 7.1.1, counsel certifies that reasonable efforts have been made to reach agreement on the subject of this motion.

WHEREFORE, Defendants ask that the Court grant this motion and enter the attached proposed order.

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Dated: June 26, 2025

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IN THE UNITED STATES DISTRICT COURT
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ZAXCOM, INC.,

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v.

RODE MICROPHONES, LLC AND
FREEDMAN ELECTRONICS PTY LTD.,

Defendants.

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C.A. No. 23-1245-JFM

[PROPOSED] ORDER

At Wilmington this ____ day of _____, 2025, having considered Defendants Rode Microphones, LLC and Freedman Electronics Pty Ltd.’s Motion to Stay Proceedings, and all papers filed in connection therewith;

IT IS HEREBY ORDERED that the Motion is GRANTED and this case is STAYED pending the result of IPR2025-00230, IPR2025-00231, IPR2025-00232, and IPR2025-00557 before the Patent Trial and Appeal Board (“PTAB”) within the United States Patent and Trademark Office, including any appeals therefrom from Final Written Decisions of the PTAB.

United States District Judge

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ZAXCOM, INC.,	)	
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Plaintiff,	)	
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v.	)	C.A. No. 23-1245-JFM
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RODE MICROPHONES, LLC AND	)	
FREEDMAN ELECTRONICS PTY LTD.,	)	
	)	
Defendants.	)	

**OPENING BRIEF OF DEFENDANTS RØDE MICROPHONES, LLC.
AND FREEDMAN ELECTRONICS PTY LTD. IN SUPPORT OF THEIR
MOTION TO STAY LITIGATION PENDING INTER PARTES REVIEW**

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I. Introduction and Summary of the Argument

Defendants RØDE Microphones LLC (“RØDE”) and Freedman Electronic Pty, Ltd. (“Freedman”) (collectively, “Defendants”) respectfully move the Court to stay this case pending the outcome of three instituted and one filed *Inter Partes* Review (“IPR”) proceedings before the Patent Trial and Appeal Board (“PTAB”), including appeals therefrom. Final written decisions are expected for three instituted IPRs challenging three patents-in-suit, U.S. Patent Nos. 7,711,443 (the “’443 patent”), 7,929,902 (the “’902 patent”), and 10,276,207 (the “’207 patent”) by June 16, 2026. If the IPR is instituted for the fourth patent, U.S. Patent No. 12,051,444 (the “’444 patent”), a final written decision is likely to issue no later than October 7, 2026. The totality of factors this district considers support granting this motion to stay.

First, a stay will significantly streamline this case. IPRs challenge all asserted claims of the ’443 patent and fourteen of twenty asserted claims of the ’902 patent. The ’443 and ’902 patents are both the earliest issued, and with 2028 expiration dates, the latest expiring patents in this case. All other asserted patents expire in July 2025. Thus, the ’443 and ’902 patents would have the most significant impact on any consideration of damages. Moreover, the outcome of the IPR proceedings will also impact this Court’s consideration of the unchallenged claims, because most unchallenged claims share duplicative limitations with claims challenged in the IPRs.

Second, the district court case is at a logical stage to pause. The Court has not set a trial date, the parties have not taken any fact depositions, nor have the parties begun expert discovery. The most burdensome and costly stages of the litigation lay ahead.

Third, the stay of the litigation will not prejudice Plaintiff. Plaintiff has not sought a preliminary injunction. Five of the seven asserted patents expire next month, so any damages

would stop accruing long before any resolution of this litigation regardless of whether there is a stay.

Fourth, because all claims of the later-expiring '443 patent and most claims of the later-expiring '902 patent are subject to instituted IPR proceedings, litigation with respect to these patents will be significantly simplified and streamlined by a stay, alleviating burdens on the Court and parties. With the IPRs certain to impact all challenged claims and most unchallenged claims, duplicative efforts in the IPR proceedings and the litigation would waste the Court's and parties' resources. A stay, however, would save the Court and the parties a significant amount of work and expense.

II. Concise Statement of Facts and Nature and Stage of the Proceedings

Plaintiff filed its original complaint on October 31, 2023 asserting six patents, the '443 '902, and '207 patents, as well as U.S. Patent Nos. 8,385,814 (the "'814 patent"); 9,336,307 (the "'307 patent"); and 11,610,605 (the "'605 patent"). D.I. 1. ("Complaint"). Over a year later, on November 14, 2024, Plaintiff filed an amended complaint. D.I. 99 ("Amended Complaint"). The Amended Complaint added the '444 patent, which issued July 30, 2024, to the litigation. The '443 patent presently has 1062 days of Patent Term Adjustment (PTA) under 35 U.S.C. 154(b) that may extend its expiration from July 14, 2025 to June 10, 2028. D.I. 99-12 at 3091. The '902 patent has 1135 days of PTA to extend its expiration from July 14, 2025 to August 22, 2028. D.I. 99-12 at 3118. The '814, 307, '207, '605, and '444 patents have not received PTA extensions, so they all expire on July 14, 2025.¹

¹ The non-extended patents expire twenty years from the earliest non-provisional filing from which they claim priority—the July 14, 2005 filing of U.S. Application No. 11/181,062, which issued as the '443 patent. D.I. 99-14 at 3147; D.I. 99-15 at 3178; D.I. 99-16 at 3206-07; D.I. 99-17 at 3258-59; D.I. 99-18 at 3308-09.

Trial has not been scheduled. Neither party has taken any fact depositions. Declaration of Michael A. Fisher (filed herewith “Fisher Decl.”) at ¶ 13. The parties have yet to begin expert discovery, with opening expert reports scheduled to be served on September 10, 2025. The parties will soon file their joint claim construction brief (D.I. 139), and the claim construction hearing is scheduled for July 9, 2025. The parties have engaged in document discovery (Fisher Decl., at ¶ 13), and exchanged contentions (D.I. 79, 86, and 103).

Defendants have challenged four of the seven asserted patents in IPR proceedings before the Patent Trial and Appeal Board (“PTAB”). The three IPRs challenging the ’443, ’902, and ’207 patents, which were filed on December 4, 2024, were instituted on June 16, 2025. Fisher Decl. Ex. A, at 2; Ex B, at 2; Ex. C, at 2. In decisions instituting the three IPRs challenging the ’443, ’902, and ’207, the PTAB found that Defendants “demonstrated a reasonable likelihood of establishing” at least one claim was unpatentable for each challenged patent. *E.g.*, Fisher Decl. Ex. B, at 50. In the 2024 fiscal year of the Patent and Trademark Office (PTO), the PTAB found at least one claim unpatentable in 85% of instituted petitions reaching a final written decision.² The fourth IPR, challenging the ’444 patent, is in its pre-institution stage (*see* Fisher Decl. Ex. H) with an institution decision due on or before October 7, 2025.³ The later challenge to the ’444 patent, filed on February 7, 2025, was due to its later issuance than the other challenged patents, and Plaintiff’s delayed assertion of this patent until November 14, 2024. D.I. 99 at ¶¶ 8, 35. The

² The PTAB’s Fiscal 2024 Report Statistics (October 1, 2023 to September 30, 2024) indicate that for the 446 petitions that resulted in a final written decision determining the patentability of the challenged claims, 312 (70%) held all challenged claims unpatentable, 67 (15%) held one or more challenged claims unpatentable, and 67 (15%) held all challenged claims patentable. *See* Fisher Decl. Ex. G, at 10.

³ Under 35 U.S.C. § 314(b)(1), the Institution Decision is due within three months of the Patent Owner’s preliminary response, which itself is due three months after the Notice of Filing Date Accorded, filed April 7, 2025. Fisher Decl. Ex. J, at 1-2.

'443 patent IPR challenges all of claims asserted in this litigation, the '902 patent IPR challenges fourteen of twenty asserted claims, the '207 patent IPR challenges eleven of sixteen claims, and the '444 patent IPR challenges nineteen of twenty-one claims.

The final written decision is due June 16, 2026 for the three instituted IPRs on the '443, '902, and '207 patents. *See, e.g.*, Fisher Decl. Ex. A; 35 U.S.C. §316(a)(11). If the IPR on the '444 patent is instituted, the final written decision would be scheduled within a year of that decision, so no later than October 7, 2026. 35 U.S.C. §316(a)(11). There are presently one-hundred and twenty nine asserted claims, with sixty of those claims challenged in an IPR.

Most of the unchallenged claims share key limitations with the challenged claims. For example, the challenged claims in all four IPRs claim timecode generator elements, which the Petitions assert are unpatentable over certain prior art references. *See, e.g.*, Fisher Decl. Ex. D, at 37-38. Unchallenged claims in the patents subject to IPRs that contain a timecode and/or timestamp generator element include: '902 patent claims 9, 10, 13, and 21-23; all unchallenged claims of the '207 patent (claims 75-76, 91-92, and 98); and all unchallenged claims of the '444 patent (claims 28-29). D.I. 99-13, at 25:36-60, 26:18-32, 1:7-2:14 (IPR certificate); Ex. D.I. 99-16, at 49:1-31, 50:24-56, 51:12-14; D.I. 99-18, at 46:1-44. Similarly, for those patents that were not challenged in an IPR, most claims also have a timecode generator element, including: '814 patent, claims 5, 7, 8, 13, 16, 22, 23, 28, 32, 33, 40, 50-58, 60, 62, 63, and 65; '307 patent, claims, 24 and 27; and '605 patent, claims 2-6, 8, 10, 17, 18, 20, and 21. D.I. 99-14, at 24:15-20, 24:25-51, 25:5-6, 25:15-28, 26:3-11, 26:54-67, 27:33-45, 27:66-67, 1:8-2:48 (IPR Certificate), 2:51-56 (IPR Certificate), 3:1-8 (IPR Certificate), 4:4-9 (IPR Certificate); D.I. 99-15, at 2:1-4 (IPR Certificate), 2:31-37 (IPR Certificate); D.I. 99-16, at 43:54-44:18, 44:24-53, 44:60-62, 46:4-12, 46:16-31. The key art—U.S. Patent No. 6,825,875 (“Strub”) and U.S. Patent No.

5,479,351 (“Woo”)—is asserted against those overlapping claim elements. D.I. 86, at Ex. B, Ex. C, and Ex. F. Thus, a decision on the claims challenged in the IPR is likely to be highly informative on the validity of the remaining asserted claims that were not challenged in the IPR.

III. Argument

A district court has the inherent power to control its own docket, including the power to stay proceedings before it. *See Clinton v. Jones*, 520 U.S. 681, 706 (1997); *Landis v. N. Am. Co.*, 299 U.S. 248, 254–55 (1936). Whether to stay proceedings pending review by the Patent and Trademark Office (“PTO”) of the validity of the patents at issue in the litigation is a matter committed to the district court’s discretion. *Destination Maternity Corp. v. Target Corp.*, 12 F. Supp. 3d 762, 766 (E.D. Pa. 2014) (citing *Cost Bros., Inc. v. Travelers Indemn. Co.*, 760 F.2d 58, 60 (3d Cir. 1985)); *see also Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1426–27 (Fed. Cir. 1988). “A stay is particularly justified when ‘the outcome of a PTO proceeding is likely to assist the court in determining patent validity or eliminate the need to try infringement issues.’” *British Telecomms. PLC v. IAC/InterActiveCorp*, No. 18-cv-366-WCB, 2019 WL 4740156, at *2 (D. Del. Sept. 27, 2019) (“BT”) (quoting *NFC Tech. LLC v. HTC Am., Inc.*, Case No. 2:13-cv-1058, 2015 WL 1069111, at *1 (E.D. Tex. Mar. 11, 2015)). “A court may decide to grant a motion to stay in order to avoid inconsistent results, narrow the issues, obtain guidance from the PTO, or simply to avoid the needless waste of judicial resources, especially if the evidence suggests that the patents-in-suit will not survive review.” *Destination Maternity*, 12 F. Supp. 3d at 766 (internal quotations omitted).

District courts typically consider three factors when determining whether to grant a stay pending IPR adjudication of the patent in suit: “(1) whether granting the stay will simplify the issues for trial; (2) the status of the litigation, particularly whether discovery is complete and a

trial date has been set; and (3) whether a stay would cause the non-movant to suffer undue prejudice from any delay, or allow the movant to gain a clear tactical advantage.” *BT*, 2019 WL 4740156, at *2 (quoting *Princeton Digit. Image Corp. v. Konami Digit. Ent. Inc.*, No. 12-cv-1461-LPS-CJB, 2014 WL 3819458, at *2 (D. Del. Jan. 15, 2014)).

Courts sometimes also consider a fourth factor—“whether a stay, or the denial thereof, will reduce the burden of litigation on the parties and on the court.” *Int’l Bus. Mach. Corp. v. Rakuten, Inc.*, No. 21-cv-461-GBW, 2022 WL 17848779, at *4 (D. Del. Dec. 22, 2022) (quoting *id.*); *Prolitec Inc. v. Scentair Techs., LLC*, No. 20-cv-984-WCB, 2023 WL 5037173, at *2 (D. Del. Aug. 8, 2023); *see also BT*, 2019 WL 4740156, at *2. Although this factor originally targeted stays pending the PTAB’s Covered Business Method (CBM) proceedings, “Congress’s desire to enhance the role of the PTO in deciding validity questions and to limit the burden of litigation on courts and parties was not restricted to CBM review proceedings” and has been applied to IPRs and *ex parte* reexaminations. *Prolitec*, 2023 WL 5037173, at *3; *see also BT*, 2019 WL 4740156, at *3.

A. A Stay Will Significantly Simplify the Case

A stay will significantly simplify the case for the courts and the parties. “The most important factor bearing on whether to grant a stay is whether the stay is likely to simplify the issues at trial.” *IOENGINE, LLC v. PayPal Holdings, Inc.*, No. 18-cv452-WCB, 2019 WL 3943058, at *8 (D. Del. Aug. 21, 2019). The PTAB has already instituted IPRs on three asserted patents and a fourth IPR is pending. *See generally* Fisher Decl. Ex. A, Ex. B, Ex. C, and Ex. H. “[A]fter the PTAB has instituted review proceedings, the parallel district court litigation ordinarily should be stayed.” *IOENGINE*. 2019 WL 3943058, at *4 (quoting *NFC*, 2015 WL 1069111, at *7).

Sixty of one-hundred and twenty-nine claims asserted in the litigation have been challenged in the IPR proceedings, of which forty one have reached the post-institution stage of the IPR. For claims challenged in the IPR, “the case will unquestionably become simpler” whether the PTAB finds those claims unpatentable or patentable. *BT*, 2019 WL 4740156, at *8. If those claims are found unpatentable, then nearly half the asserted claims in the litigation go away. Likewise, if the IPR proceeding results in one or more challenged claims being found patentable, then the “statutory estoppel provision, 35 U.S.C. § 315(e)(2), will bar the defendants from seeking to invalidate the claims that were included in the IPR on any ground that was raised in the IPR petition or could have been raised in that petition.” *Id.* “[T]he odds are high that the IPRs will reduce the number of claims at issue in this case.” *SITO Mobile R&D IP, LLC v. World Wrestling Ent., Inc.*, No. 21-cv-721-CFC, 2021 WL 7628181, at *1 (D. Del. Dec. 20, 2021).

Courts in this district have often held that “even when IPRs are instituted on fewer than all the asserted claims, the policies favoring simplification and the reduction of litigation burdens on the parties and the court are often applicable, particularly when the claims that are before the PTAB in an IPR are similar to those that are not.” *BT*, 2019 WL 4740156, at *7 (stayed when nine of eleven asserted claims of the patent-in-suit were challenged in an instituted IPR); *see also Helios Streaming, LLC v. Vudu, Inc.*, No. 19-cv-1792-CFC-SRF, 2021 WL 8155604, at *1-2 (D. Del. Aug. 5, 2021) (stayed when only one of the remaining eight patents-in-suit were challenged in instituted IPRs); *Ethicon LLC v. Intuitive Surgical, Inc.*, No. 17-cv-871-LPS, 2019 WL 1276029, at *1 (D. Del. Mar. 20, 2019) (stayed when “IPR proceedings have been instituted against six of the seven patents-in-suit.”); *SITO Mobile*, 2021 WL 7628181, at *1-2 (stayed when “[t]he IPRs cover seven of the 12 asserted patents” and “[t]he PTAB has instituted IPRs for

every claim of the seven patents in question for which post-grant review was sought.”); *Monterey Rsch., LLC v. Nanya Tech. Corp.*, No. 19-cv-2090, 2021 WL 6502552, at *1 n.1 (D. Del. June 25, 2021) (stayed when the IPRs covered 4 of 6 patents-in-suit).

The ’443 and ’902 patents are both the earliest issued, and the latest expiring, patents in this case. As such, the ’443 and ’902 patents would have the most significant impact on any consideration of damages. IPRs challenge all asserted claims of the ’443 patent and fourteen of twenty asserted claims of the ’902 patent. Thus, the IPRs will significantly simplify and streamline the consideration of these claims, which in turn will simplify and streamline any consideration of damages.

Additionally, most of the claims that have not been challenged in the IPRs contain numerous overlapping elements with the challenged claims. For example, as explained above (*supra* § II), all of the challenged claims have elements relating to a timecode generator. The claims that were not challenged have a claim element relating to “dropout repair or replacing remotely recorded audio data with local audio data.” *See* Fisher Decl. Ex. D, at 14; Ex. E, at 13; Ex. F, at 13. Many claims that have not been challenged in an IPR recite overlapping elements, such as the timecode generator elements that appear in over forty claims, which are central to the claims of the four IPR challenges. To illustrate this overlap, challenged claim 17 and unchallenged claim 75 of the ’207 patent are shown side-by-side.

	’207 Patent, Claim 17 (challenged in IPR3035-00232)	’207 Patent, Claim 75 (not challenged in an IPR)
Pre	17. At least one audio device wearable by a user for storing locally generated audio and transmitting the locally generated audio to a remote device,	75. A recording system, comprising:
A	the remote device including at least one of a receiver, a recorder , a mixer, and	a remote device, the remote device including at least one of a receiver and a

	'207 Patent, Claim 17 (challenged in IPR3035-00232)	'207 Patent, Claim 75 (not challenged in an IPR)
	combination thereof,	recorder; and
B	the at least one audio device comprising:	an audio device , including
C	a wireless transmitter,	a wireless transmitter,
D	an audio input port configured to couple to an audio input device to receive the locally generated audio;	
E	a memory;	a memory,
F	a local timecode generator operable to generate a local timecode;	a local timecode generator operable to generate a local timecode;
D'		an audio input port configured to couple to an audio input device to receive the locally generated audio, and
H	a control unit coupled to the wireless transmitter, the audio input port, the memory, and the local timecode generator, the control unit operable to:	a control unit coupled to the wireless transmitter, the memory, the local timecode generator and the audio input port, the control unit being operable to
I	(i) receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode,	(i) receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode,
J	(ii) transmit the locally generated audio to the remote device via the wireless transmitter; and	(ii) transmit the locally generated audio to the remote device via the wireless transmitter,
K	(iii) store the locally generated audio in the memory as audio data; and	(iii) store the locally generated audio in the memory as audio data; and
L	(iv) stamp at least a portion of the audio data with the local timecode.	(iv) stamp at least a portion of the audio data with the local timecode,
M		the audio data being retrievable from the memory post-recording, wherein the remote device is configured to permit an operator to correct for dropouts or interference in the locally generated audio transmitted to the remote device using the audio data retrieved from the memory post-recording.

Claims 17 and 75 share all but one claim element, element M (in red), which relates to dropout repair (in red). The other difference is merely the ordering of claim 17, element D, and claim 75, element D', but the order does not impact that term's meaning.

Because of shared claim scope, arguments concerning these claims will be impacted by admissions, evidence, and findings in the IPR proceedings, meaning that one-hundred and nine of the one-hundred and twenty-nine asserted claims in this litigation is likely to be impacted by the outcome of the IPRs. The patents at issue are all part of the same family, and Plaintiff's "statements to the PTO during the IPRs will become part of the various patents' file histories, thus helping to clarify and perhaps narrow the scope of the remaining claims." *SITO Mobile*, 2021 WL 7628181, at *1. Thus, "any decisions cancelling claims from the first three patents at issue will doubtlessly simplify the case before this court," which strongly favors a stay. *See Dental Monitoring v. Get-Grin Inc.*, No. 22-cv-647-WCB, 2024 WL 1603403, at *6 (D. Del. Apr. 9, 2024).

B. The Stage of Litigation Favors a Stay

The stage of the case, the second factor in the stay analysis, also favors a stay. Trial has not been scheduled, the parties have yet to begin expert discovery, neither party has taken any fact depositions, and the claim construction hearing has not yet occurred (D.I. 60, 132; Fisher Decl., at ¶ 13). *See Helios*, 2021 WL 8155604, at *3 ("In this case, fact discovery remains ongoing, no depositions have been taken, expert discovery has not yet begun . . .") "Although this case is not 'in its infancy,' a stay is warranted because 'the bulk of the expenses that the parties would incur ... is still in the future.'" *Id.* *3 (quoting *IOENGINE*, 2019 WL 3943058, at *5); *see also NFC*, 2015 WL 1069111, at *3 ("[I]t appears likely that the bulk of the expenses that the parties would incur in pretrial work and trial preparation are still in the future.").

Courts in this district and others have found stays warranted for much more advanced cases, including after parties have finished expert discovery and the court has issued a claim construction decision. *Consumeron, LLC v. MapleBear Inc.*, No. 21-cv-1147-GBW-MPT, 2023

WL 3434002, at *2 (D. Del. May 12, 2023). In fact, courts in this district have stayed cases pending IPRs mere months from trial dates. *See, e.g., Prolitec*, 2023 WL 5037173, at *7 (stay granted seven months before scheduled trial wherein some of the pretrial proceedings in this case have been completed); *see also TC Tech. LLC v. Sprint Corp.*, No. 16-cv-153-WCB, 2021 WL 4521045, at *7 (D. Del. Oct. 4, 2021) (stay granted less than two months before trial); *British Telecomms. PLC v. IAC/InterActiveCorp*, No. 18-cv-366-WCB, 2020 WL 5517283, at *5 (D. Del. Sept. 11, 2020) (stay granted less than three months before trial); *AGIS Software Dev. LLC v. Google LLC*, No. 19-cv-361-JRG, 2021 WL 465424, at *3 (E.D. Tex. Feb. 9, 2021) (stay granted three months before trial); *see also Ramot At Tel Aviv Univ. Ltd. v. Cisco Sys., Inc.*, No. 19-cv-225-JRG, 2021 WL 121154, at *2 (E.D. Tex. Jan. 13, 2021) (stay granted six weeks before trial); *CyWee Grp. Ltd. v. Samsung Elec. Co.*, No. 17-cv-140-WCB-RSP, 2019 WL 11023976, at *6–7 (E.D. Tex. Feb. 14, 2019) (stay granted three months before trial); *Ericsson Inc. v. TCL Commc'n Tech. Holdings, Ltd.*, No. 15-cv-11-RSP, 2016 WL 1162162, at *2 (E.D. Tex. Mar. 23, 2016) (stay granted within two months of trial). Staying this case at its current stage would be keeping with the common operation of Courts in this district.

The Court should not be dissuaded from staying the case based on the parties' upcoming submission of their joint claim construction brief (D.I. 139), or their exchange of documents (Fisher Decl., at ¶ 13 and contentions (D.I. 79, 86, and 103). *See RetailMeNot, Inc. v. Honey Sci. LLC*, No. 18-937-CFC-MPT, 2020 WL 373341, at *6 (D. Del. Jan. 23, 2020) (finding that the stage of the litigation weighed in favor of a stay, even though the claim construction Report and Recommendation was pending and depositions were continuing). The *RetailMeNot* decision explained that the stay would “avoid further fact discovery, the entirety of expert discovery and

associated expert reports, filing and responding to dispositive and other pretrial motions,” and otherwise preparing for and participating in trial. *Id.*

A similar rationale apply here. Costly and time-consuming fact depositions have not begun, expert discovery has yet to begin, and the Court has yet to issue its claim construction recommendation. Therefore, this case is at an “efficient stopping point, and any weight given to this factor is outweighed by the likelihood that the issues for trial will be simplified by a stay.” *Ethicon*, 2019 WL 1276029, at *2. “Because the PTAB’s final written decisions in the IPR proceedings are likely to substantially narrow the scope of the cases, many of the expenses incurred” by the parties “will be reduced and/or eliminated if a stay is entered.” *Helios*, 2021 WL 8155604, at *3. The reduced burden on the parties and the courts favors a stay.

C. A Stay Would Neither Unduly Prejudice nor Tactically Disadvantage Plaintiffs

In evaluating whether undue prejudice or a clear tactical advantage exists, courts in this district typically examine four sub-factors: (1) the timing of the request for review; (2) the timing of the request for a stay; (3) the status of the review proceedings; and (4) the relationship of the parties. *IOENGINE*, 2019 WL 3943058, at *5 (collecting cases). “The prejudice factor, unlike the others, cuts in favor of denying a stay, but only modestly.” *Dental Monitoring*, 2024 WL 1603403, at *8 (D. Del. Apr. 9, 2024).

Defendants acted with reasonable dispatch in filing their IPR petitions. In its Complaint, Plaintiff asserted six patents and one-hundred and fourteen claims. When Plaintiff refused to narrow the number of claims in this dispute, Defendant moved to compel narrowing of the litigation on November 4, 2024. D.I. 90. Upon filing the Amended Complaint November 13, 2024, Plaintiff had asserted seven patents and one-hundred and thirty-nine claims against Defendants. D.I. 79, 99. In view of the significant number of asserted patents and claims, the

filing of the three IPR petitions challenging the '443, '902, and '207 patents on the one-year statutory deadline was reasonable. *See Ethicon*, 2019 WL 1276029, at *3 (finding Plaintiff's "delay in narrowing its asserted claims weigh in favor of [Defendant]"). Moreover, Plaintiff did not add the '444 patent, which issued July 30, 2024, until filing its Amended Complaint several months later in November 13, 2024. Defendants promptly filed their IPR petition challenging the '444 patent less than three months later on February 7, 2025. Because it was the last filed IPR, the '444 patent IPR will likely determine the length of a stay. Plaintiff bears nearly all the responsibility for the timing of the '444 patent IPR by its decision to add the late-issuing '444 patent to this litigation and delaying its addition to the case by three and a half months—from July 30, 2024 to November 13, 2024—which is more time elapsed than from the '444 patents addition to this litigation to Defendants' IPR filing. Given this delay, Plaintiff's cannot now credibly allege that a stay would prejudice Plaintiffs.

Immediately following the institution decisions of June 16, 2025, Defendants informed Plaintiff of their intention to move for a stay on June 20, 2025 (Fisher Decl. Ex. I) and promptly moved for this stay the following week after meeting and conferring with Plaintiff on June 25, 2025. (Fisher Decl., at ¶ 13). Thus, the timing of the Defendants' stay request supports grant of a stay. *See, e.g., Consumeron*, 2023 WL 3434002, at *2 (finding that the stay motion filed within three weeks of the institution decision favored a stay); *Ethicon*, 2019 WL 1276029, at *2 (Defendants "move[] to stay within days of receiving the PTAB's first wave of institution decisions" favored a stay).

As explained above (*supra* § II), there is a high probability that some or all claims of the '443, '902, and '207 patent will be found unpatentable, thereby streamlining this case significantly. Additionally, if any claims are not found unpatentable, Defendants' will be subject

to statutory estoppel. As explained above (*infra* § III. A), the outcome of the IPR decisions will directly impact sixty of the one-hundred and twenty-nine asserted claims in this litigation.

Instituted IPRs challenge all asserted claims of the '443 patent and fourteen of twenty asserted claims of the '902 patent. The '443 and '902 patents are both the earliest issued, and with 2028 expiration dates, the latest expiring patents in this case, and will have most significant impact on any consideration of damages. Thus, the outcome of these IPRs may figure significantly into this case. *Supra* § II.

Because of the significant overlap of claim elements between challenged and unchallenged claims, the impact of the IPR proceedings is expected to potentially impact most unchallenged claims. Thus, the IPR outcomes will weigh in the Court's consideration of one hundred and seven of one-hundred and twenty-nine challenged claims. "[T]he IPR proceedings are already underway and, while the case will be delayed" by a stay "there is a significant likelihood that the IPRs would significantly impact this litigation in any event." *Conuseron*, 2023 WL 3434002, at *2.

Despite this case pending since late-2023, Plaintiff has not moved for a preliminary injunction. *See Ethicon*, 2019 WL 1276029, at *3 (Plaintiff's "decision not to seek a preliminary injunction" weighed against finding prejudice to the plaintiff.). The remaining patents-in-suit expire next month, on July 14, 2025. *Supra* § II. This fact further supports a stay because any potential damages related to these patents will cease accruing long before the litigation is resolved, whether or not the case is stayed. The totality of circumstances indicate that Plaintiff will not suffer undue prejudice if the case is stayed.

D. A Stay Will Decrease the Burdens of the Parties and the Court

A stay will substantially reduce the burden of the Court and the parties. As explained above (*supra* §§ III. A, B), many of the resources to be expended with respect to the '443, '902, '207, and '444 patents will be mooted by the IPR proceeding. And many issues relating to most of the unchallenged claims will also be addressed in the IPR proceedings. If the case continues concurrently with the IPR trials, however, the Court and the parties will face a substantial burden addressing issues that may be mooted by the IPR.

A substantial amount of work and expense is still needed in this case: (1) fact witness depositions have not begun (Fisher Decl., at ¶ 13.); (2) opening expert reports regarding infringement and invalidity for all the Asserted Patents are due September 10, 2025 through October 29, 2025, (3) the due dates for pre-trial disclosures and *motions in limine* have been set, and (4) the date for trial has not been set. D.I. 60. A significant amount of work would take place before the one-year deadline for the PTAB to issue its final written decisions on the '443, '902, and '207 patents, and the projected final written decision date for the IPR of the '444 patent.

“Although the three-factor test ... informs the court’s decision whether to issue a stay pending post-grant proceedings, that test merely provides general guidance; it is not a rigid template for decision.” *Prolitec*, 2023 WL 5037173, at *4 (citing *Murata Mach. USA v. Daifuku Co., Ltd.*, 830 F.3d 1357, 1362 (Fed. Cir. 2016)). This Court has the “discretionary prerogative to balance considerations beyond those captured by the three-factor stay test.” *Id.* The steps the parties have yet to complete here, including “completing discovery, preparing expert reports, filing and responding to pretrial motions, preparing for trial, going through the trial process, and engaging in post-trial motions practice” are “the most burdensome stages of the case.”

IOENGINE, 2019 WL 3943058, at *5 (citing *CyWee*, 2019 WL 11023976, at *6; *Smartflash LLC v. Apple Inc.*, 621 F. App'x 995, 1005 (Fed. Cir. 2015) (holding that the district court abused its discretion when it denied a stay prior to trial, because “[d]espite the substantial time and effort already spent in this case, the most burdensome task is yet to come.”)); *see also SITO Mobile*, 2021 WL 7628181, at *2; *Helios*, 2021 WL 8155604, at *3; *RetailMeNot*, 2020 WL 373341, at *8.

Moving forward with the case while the IPRs are pending before the PTAB will invariably lead to unnecessarily duplicative efforts for both the challenged patents and the unchallenged patents. Many of these efforts are likely to be obviated by final written decisions for the '443, '902, '207, and '444 patents. Thus, a stay will significantly reduce the burden and costs to the Court and the parties.

IV. Conclusion

For the foregoing reasons, the Court should enter an order staying the proceedings of this case pending the result of the IPRs instituted by the PTAB on the '443, '902, and '207 patents, as well as the IPR on the '444 patent, including any appeals therefrom.

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Dated: June 26, 2025

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ZAXCOM, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 23-1245-JFM
	)	
RODE MICROPHONES, LLC AND	)	
FREEDMAN ELECTRONICS PTY LTD.,	)	
	)	
Defendants.	)	

DECLARATION OF MICHAEL A. FISHER IN SUPPORT OF DEFENDANTS RØDE MICROPHONES, LLC'S AND FREEDMAN ELECTRONICS PTY LTD.'S MOTION TO STAY LITIGATION PENDING INTER PARTES REVIEW

I, Michael A. Fisher, declare as follows:

1. I am an attorney for Defendants RØDE MICROPHONES, LLC and FREEDMAN ELECTRONICS PTY LTD. in the above-captioned action. I am over the age of eighteen, am licensed to practice law in Pennsylvania and New York, and have been admitted pro hac vice to this Court for the above-captioned matter. I have personal knowledge of the facts set forth herein and, if called upon as a witness, could and would testify to them competently under oath.

2. I submit this Declaration in support of Defendants RØDE MICROPHONES, LLC's and FREEDMAN ELECTRONICS PTY LTD.'s Motion to Stay Litigation Pending Inter Partes Review.

3. Attached as Exhibit A is a true and correct copy of the June 16, 2025 Decision of the Patent Trial and Appeal Board Granting Institution of Inter Partes Review in *Rode Microphones, LLC v. Zaxcom, Inc.*, Case No. 2025-00230 (P.T.A.B.).

4. Attached as Exhibit B is a true and correct copy of the June 16, 2025 Decision of the Patent Trial and Appeal Board Granting Institution of Inter Partes Review *Rode Microphones, LLC v. Zaxcom, Inc.*, Case No. 2025-00231 (P.T.A.B.).

5. Attached as Exhibit C is a true and correct copy of the June 16, 2025 Decision of the Patent Trial and Appeal Board Granting Institution of Inter Partes Review in *Rode Microphones, LLC v. Zaxcom, Inc.*, Case No. 2025-00232 (P.T.A.B.).

6. Attached as Exhibit D is a true and correct copy of the December 4, 2024 Petition for Inter Partes Review filed in *Rode Microphones, LLC v. Zaxcom, Inc.*, Case No. 2025-00230 (P.T.A.B.).

7. Attached as Exhibit E is a true and correct copy of the December 4, 2024 Petition for Inter Partes Review filed in *Rode Microphones, LLC v. Zaxcom, Inc.*, Case No. 2025-00231 (P.T.A.B.).

8. Attached as Exhibit F is a true and correct copy of the December 4, 2024 Petition for Inter Parties Review filed in *Rode Microphones, LLC v. Zaxcom, Inc.*, Case No. 2025-00232 (P.T.A.B.).

9. Attached as Exhibit G is a true and correct copy of a document from the United States Patent and Trademark Office titled “PTAB Trial Statistics Fiscal Year 2024 End of Year Outcome Roundup IPR, PGR,” which can be found at https://www.uspto.gov/sites/default/files/documents/ptab_aia_fy2024_roundup.pdf.

10. Attached as Exhibit H is a true and correct copy of the February 7, 2025 Petition for Inter Partes Review filed in *Rode Microphones, LLC v. Zaxcom, Inc.*, Case No. 2025-00557 (P.T.A.B.).

11. Attached as Exhibit I is a true and correct copy of a June 20, 2025 email

correspondence from Defendants' counsel to Plaintiff's counsel informing Plaintiff's counsel of Defendants' intention to move for a stay of this action.

12. Attached as Exhibit J is a true and correct copy of the April 7, 2025 Notice of Filing Date Accorded to Petition and Time for Filing Patent Owner Response in *Rode Microphones, LLC v. Zaxcom, Inc.*, Case No. 2025-00557, Paper 5 (P.T.A.B.).

13. As of today's date, neither party has taken any fact depositions in this action. The parties have, however, engaged in document discovery and exchanged documents. After the PTAB's institution decisions of June 16, 2025, Defendants notified Plaintiff of their intention to move for a stay via email correspondence on June 20, 2025. The parties met and conferred on June 25, 2025, and Plaintiff notified Defendant of its intention to oppose a stay.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 26th day of June, 2025, in Philadelphia, Pennsylvania.

/s/ Michael A. Fisher

Michael A. Fisher

Exhibit A

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RØDE MICROPHONES, LLC, and
FREEDMAN ELECTRONICS PTY LTD.,
Petitioner,

v.

ZAXCOM, INC.,
Patent Owner.

IPR2025-00230
Patent 7,711,443 B1

Before JUSTIN T. ARBES, MIRIAM L. QUINN, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

PER CURIAM.

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

I. INTRODUCTION

A. Background and Summary

RØDE Microphones, LLC, and Freedman Electronics Pty Ltd. (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–4, 7–9, 15, 17, 19, 20, and 22–27 of U.S. Patent No. 7,711,443 (Ex. 1001, “the ’443 patent”) pursuant to 35 U.S.C. § 311(a).

Patent Owner Zaxcom, Inc. filed a Preliminary Response (Paper 8, “Prelim. Resp.”) pursuant to 35 U.S.C. § 313. Also, pursuant to our authorization (Paper 9), Petitioner filed a Preliminary Reply (Paper 10, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-Reply (Paper 11, “Prelim. Sur-Reply”).

Pursuant to 35 U.S.C. § 314(a), the Director may not authorize an *inter partes* review unless the information in the petition and preliminary response “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” *See* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”). For the reasons that follow, we institute an *inter partes* review as to claims 1–4, 7–9, 15, 17, 19, 20, and 22–27 of the ’443 patent on all grounds of unpatentability asserted with respect to those claims in the Petition.

B. Related Matters

The parties indicate that the ’443 patent is the subject of *Zaxcom, Inc. v. RØDE Microphones, LLC, et al.*, No. 1:23-cv-01245-JFM (D. Del.) (“the district court case”). *See* Pet. xi; Paper 6, 2. Petitioner filed petitions challenging other patents related to the ’443 patent and asserted in the district court case: U.S. Patent No. 7,929,902 B1 (Ex. 1030, “the ’902 patent”) (IPR2025-00231), U.S. Patent No. 10,276,207 B1 (IPR2025-00232), and U.S. Patent No. 12,051,444 B2 (IPR2025-00557).

Three patents related to the ’443 patent previously were challenged by a different petitioner, Lectrosonics, Inc. In IPR2018-00972, the Board found challenged claims 1–14 of U.S. Patent No. 9,336,307 B2 (Ex. 1015, “the ’307 patent”) unpatentable and granted Patent Owner’s motion to amend

seeking to add proposed substitute claims 15–28. Ex. 1014.

In IPR2018-01129, the Board found challenged claims 7, 8, 11, 12, 14, and 15 of the '902 patent unpatentable and granted Patent Owner's motion to amend seeking to add proposed substitute claims 21–26. Ex. 1017.

In IPR2018-01130, the Board found challenged claims 1–4, 9, 10, 12, 15, 31, 36, 37, and 41–45 of U.S. Patent No. 8,385,814 B2 (Ex. 1028, "the '814 patent") unpatentable and granted Patent Owner's motion to amend seeking to add proposed substitute claims 50–65. Ex. 1018. The Board's final written decisions were affirmed, and the Office issued *inter partes* review certificates cancelling the challenged claims and adding the substitute claims. *See* Pet. 12; Exs. 1015, 1028, 1030; *Zaxcom, Inc. v. Lectrosonics, Inc.*, No. 2020-1350, 2022 WL 499843 (Fed. Cir. Feb. 18, 2022); *Zaxcom, Inc. v. Lectrosonics, Inc.*, No. 2020-1921, 2022 WL 499848 (Fed. Cir. Feb. 18, 2022). We refer to the earlier proceedings as "the Lectrosonics IPRs."

C. The '443 Patent

The '443 patent discloses a system and method "for wirelessly recording multi-track audio files without the data corruption or loss of data that typically occurs with wireless data transmission." Ex. 1001, code (57). Figure 1 of the '443 patent is reproduced below.

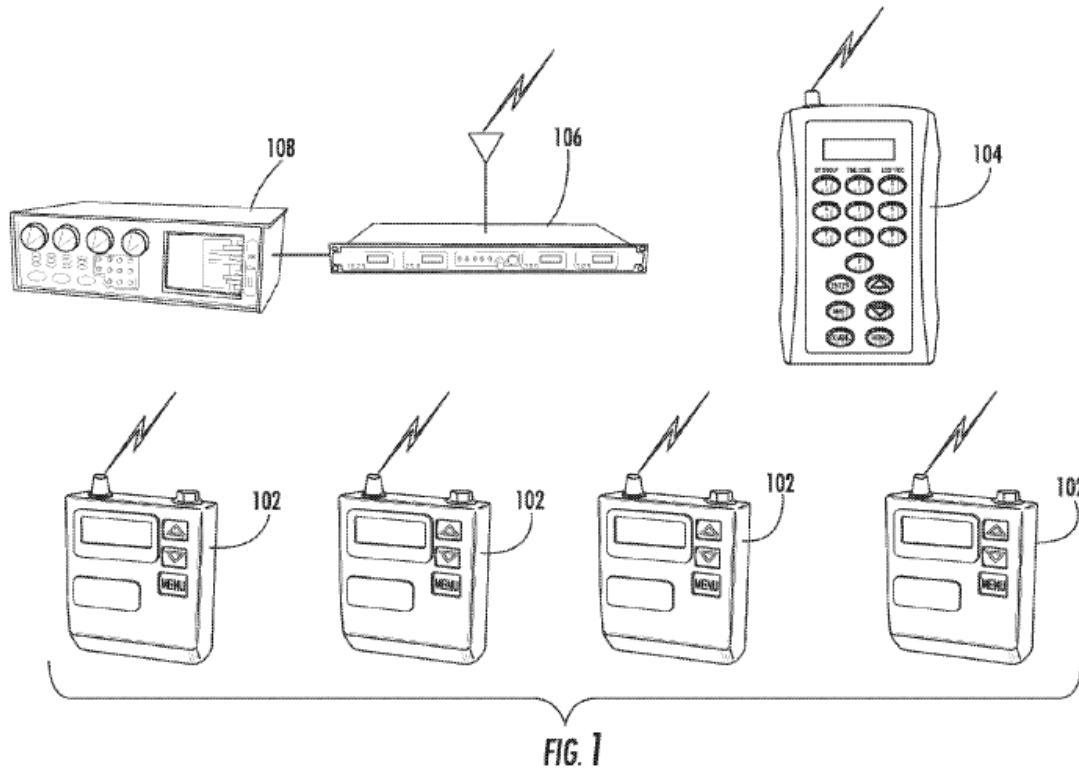


Figure 1 depicts recording system 100, which “wirelessly records audio events, such as performances, movie takes, etc. having one or more performers.” Ex. 1001, col. 3, ll. 30–32. “Recording system 100 includes local audio devices 102, remote control unit (‘RCU’) 104, receiver 106, and recorder 108.” *Id.* at col. 3, ll. 56–58. Local audio devices 102 record live audio and store the audio in memory using timestamps that are synchronized with the timestamps of recorder 108. *Id.* at col. 4, ll. 20–25. Local audio devices 102 may transmit both live and replayed audio to receiver 106 to be recorded by audio recorder 108. *Id.* at col. 4, ll. 1–3. “RCU 104 includes an RF transmitter capable of transmitting one or more of a time reference signal, digital commands, and audio to one or more other components of recording system 100.” *Id.* at col. 3, ll. 58–61. The RCU may remotely control local audio devices 102, receiver 106, and recorder 108 for “initiating audio playback of all local audio devices 102 starting at the same

time reference, as well as recording thereof by receiver 106 and recorder 108.” *Id.* at col. 3, ll. 62–67.

D. Illustrative Claims

Challenged claim 1 of the ’443 patent is independent. Claims 2–4, 7–9, 15, 17, 19, 20, and 22–27 depend from claim 1. Claim 1 recites the following (with letter designations used in the Petition to refer to the various limitations):

1. [Pre] A system for recording locally generated audio comprising:

[A] at least one master timecode generator for generating a plurality of master timecodes; and

[B] at least one local audio device wearable by a creator of said locally generated audio including:

[C] at least one local audio device receiver for wirelessly receiving said master timecodes;

[D] at least one audio input port for receiving locally generated audio from an audio input device;

[E] at least one memory;

[F] at least one control unit in communication with said local audio device receiver, said audio input device, and said memory for creating local audio data from said locally generated audio and storing said local audio data in said memory; and

[G] at least one local audio device wireless transmitter for wirelessly transmitting said local audio data in real time, said at least one local audio device wireless transmitter in communication with said at least one control unit;

[H] wherein said local audio data includes stamped local audio data and unstamped local audio data;

[I] wherein said stamped local audio data includes at least one timestamp to reference at least a portion of said local audio data to at least one of said master timecodes; and

[J] wherein said unstamped local audio data does not include a reference to said master timecodes.

E. Evidence

Petitioner relies on the following prior art:

U.S. Patent No. 5,479,351, issued Dec. 26, 1995 (Ex. 1004, “Woo”);

U.S. Patent No. 6,571,211 B1, issued May 27, 2003 (Ex. 1009, “Dwyer”);

U.S. Patent No. 6,825,875 B1, issued Nov. 30, 2004 (Ex. 1003, “Strub”);

U.S. Patent No. 7,483,485 B2, issued Jan. 27, 2009 (Ex. 1008, “Winningstad”);

U.S. Patent Application Publication No. 2002/0159179 A1, published Oct. 31, 2002 (Ex. 1005, “Nagai”); and

U.S. Patent Application Publication No. 2004/0028241 A1, published Feb. 12, 2004 (Ex. 1006, “Gleissner”).

F. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–4, 7–9, 15, 17, 19, 20, and 22–27 of the ’443 patent would have been obvious on the basis of prior art printed publications under 35 U.S.C. § 103(a) on the following grounds:¹

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. The ’443 patent claims priority to an application filed before the effective date of the applicable AIA amendment, and Petitioner refers to the pre-AIA version of 35 U.S.C. § 102; therefore, we refer to the pre-AIA version of 35 U.S.C. § 103. *See* Pet. 15, 17, 19, 22, 23, 26; Ex. 1001, code (22).

Reference(s)	Basis	Challenged Claims
Strub, Woo, Nagai, Gleissner	§ 103	1–3, 7, 8, 15, 17, 19, 20, 23–27
Strub, Woo, Nagai, Gleissner, Winningstad	§ 103	4, 9
Strub, Woo, Nagai, Gleissner, Dwyer	§ 103	22

II. ANALYSIS

A. Discretionary Denial Under 35 U.S.C. § 314(a)

Institution of *inter partes* review is discretionary. *See 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 [*inter partes* review (IPR)] proceeding.”); 35 U.S.C. § 314(a) (“The Director *may not* authorize an *inter partes* review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” (emphasis added)). Patent Owner argues that we should exercise our discretion to deny the Petition in view of the district court case. Prelim. Resp. 9–19. Petitioner disagrees. Pet. 82–85.

The Board has held that the advanced state of a parallel district court action is a factor that may weigh in favor of denying a petition under § 314(a). *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752,

Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential); Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019), 58 & n.2, *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>. We consider the following factors to assess “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding”:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential). In evaluating these factors, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

1. Whether the Court Granted a Stay or Evidence Exists That One May Be Granted if a Proceeding is Instituted

Patent Owner contends that a stay has not been requested in the district court case and, if requested, would “likely” be denied. Prelim. Resp. 10–11. Petitioner contends that Petitioner “intends to seek a stay” of the district court case, but without specific evidence how the court will rule, this

factor is neutral. *See* Pet. 82 (citing *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking, LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative)).

We decline to speculate whether the district court will grant a stay. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative). Thus, we find that factor 1 is neutral.

2. *Proximity of the Court’s Trial Date to the Board’s Projected Statutory Deadline for a Final Written Decision*

Patent Owner argues that although a trial date has not been set in the district court case, it is reasonable to assume that the trial will occur “during 2026.” Prelim. Resp. 15–16. Patent Owner argues that the statutory deadline for the final written decision in the last of the related proceedings (IPR2025-00557) is one year from the date of potential institution thereof, which would be no earlier than September 18, 2026. *Id.* at 16.

Petitioner argues that this factor weighs against exercising our discretion because “the final summary judgment and Daubert briefs [in the district court case] are not due until April 10, 2026,” so “it is extremely unlikely that trial will start in or before June 2026.” Pet. 83.

Patent Owner focuses on the statutory deadline for the final written decision in IPR2025-00557 (if instituted), but the statutory deadline for the final written decision in this proceeding would be in June 2026. There is no trial date set in the district court case. *See* Ex. 1031, 3. Therefore, we find that factor 2 weighs against exercising discretion to deny institution.

3. *Investment in the Parallel Proceeding by the Court and the Parties*

Patent Owner argues that the parties have expended significant time and resources in the district court case, including substantially completing document production on February 5, 2025. Prelim. Resp. 12, 16. Patent Owner argues that claim construction briefing is set to be completed on June 20, 2025, fact discovery closes on August 15, 2025, expert discovery closes on January 23, 2026, and summary judgment and Daubert briefing is scheduled to conclude by April 10, 2026. *Id.* at 12. Patent Owner argues that the significant time and resources expended in the district court case were necessitated by Petitioner's delay in filing its petitions in this proceeding and the related proceedings "until the eve of the statutory deadlines, despite knowledge of [Patent Owner's] claims for over 44 months prior thereto." *Id.* at 16–17. Patent Owner argues that institution in this proceeding would result in expensive duplication of effort. *Id.* at 17.

Petitioner argues that this factor weighs against exercising discretion because fact discovery does not end until August 2025, claim construction and expert discovery have not yet begun, a trial date has not been set, and no substantive orders have been issued related to the challenged patent. Pet. 83–84.

We agree with Petitioner that much work remains in the district court case as it relates to validity because discovery is in its early stages, claim construction briefing is not yet complete, and a *Markman* hearing has not yet occurred. *See* Ex. 1031, 3. Petitioner filed the Petition approximately fourteen months after Patent Owner filed its original complaint in the district court case, but less than one month after Patent Owner filed its amended complaint. *See* Pet. ix; Prelim. Resp. 2; Exs. 2001, 2002. Although the

filing of the Petition does not seem diligent, the timing overall does not outweigh the limited investment in the district court case. Given that limited investment, we determine that this factor weighs slightly against exercising discretion to deny institution.

4. Overlap Between Issues Raised in the Petition and in the Parallel Proceeding

Patent Owner contends that there is “100% overlap between the issues in the Petition and the [district court case], which both rely on identical prior art references and arguments.” Prelim. Resp. 17.

Petitioner argues that although all of the challenged claims are currently being asserted in the district court case, the district court recently issued a revised scheduling order which requires Patent Owner to reduce its asserted claims before the *Markman* hearing and after the *Markman* ruling. Pet. 84. Petitioner argues that in light of this reduction, and the overall number of asserted claims, it is likely that many of the challenged claims will not be asserted in the district court case. *Id.* Patent Owner disagrees with this assertion, arguing that it is “pure speculation” because the district court has continued to refuse to force Patent Owner to narrow the number of asserted claims. Prelim. Resp. 17 (citing Ex. 2012).

We decline to speculate whether the claims asserted in the district court case will be narrowed sufficiently that the overlap between the challenged claims and the asserted claims substantially changes. We find that this factor weighs in favor of exercising discretion to deny institution.

5. *Whether the Petitioner and the Defendant in the Parallel Proceeding Are the Same Party*

Patent Owner contends that the parties to this proceeding are the same parties in the district court case. Prelim. Resp. 18. Petitioner agrees, and argues that this factor may depend on which tribunal is likely to address the challenged patent first, which Petitioner contends is the Board. Pet. 84–85. Because the parties in this proceeding and the district court case are the same, we find that this factor weighs in favor of exercising discretion to deny institution.

6. *Other Circumstances that Impact the Board’s Exercise of Discretion, Including the Merits*

Petitioner argues that the “strong showing on the merits” in the Petition weighs against exercising discretion to deny institution, citing the previous USPTO Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022), *available at* https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621.pdf. Pet. 82, 85.

Patent Owner argues that the Office’s revocation of the Memorandum,² which “eliminates ‘compelling evidence of patentability’ as a criterion for refusing to deny institution, moots [Petitioner’s] argument.” Prelim. Resp. 19. Patent Owner argues that the merits in this proceeding are

² See USPTO Memorandum, Guidance on USPTO’s Recission of “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation” (March 24, 2025), *available at* https://www.uspto.gov/sites/default/files/documents/guidance_memo_on_interim_procedure_recission_20250324.pdf.

“not a close call” and other factors favoring denial are present, including the district court case that “has 100% overlap with the issues in this Petition” and “also includes 3 additional patents and 66 additional claims.” *Id.*

The issues raised by Petitioner are similar to those raised in the Lectrosonics IPRs. In IPR2018-00972, similar claims were found unpatentable over Strub, Nagai, and Gleissner. In IPR2018-01129, similar claims were found unpatentable over Strub, Nagai, Gleissner, and Woo. In IPR2018-01130, similar claims were found unpatentable over Strub, Nagai, Gleissner, and Woo. In each of these cases, many of the same issues were decided, albeit under a different claim construction standard.

In view of the totality of the circumstances, this factor weighs against exercising discretionary denial.

7. Conclusion

Having considered the factors above, including the timing of the proceedings, the amount of overlap and additional patents and claims in the district court case, the amount of effort that has been and is yet to be expended in the district court case, and the merits of Petitioner’s challenges, we find that, taken as a whole, the factors do not favor exercising discretion to deny institution. Although the overlapping parties and issues with the district court case weigh in favor of discretionary denial, the lack of any trial date, limited investment in the district court case, and similarity to claims previously held unpatentable by this tribunal weigh against exercising our discretion, and the remaining factor regarding a potential stay is neutral. Accordingly, we decline to exercise discretion to deny institution under § 314(a).

B. Legal Standards

A claim is unpatentable for obviousness if, to one of ordinary skill in the pertinent art, “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). The question of obviousness is resolved on the basis of underlying factual determinations, including “the scope and content of the prior art”; “differences between the prior art and the claims at issue”; and “the level of ordinary skill in the pertinent art.” *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Additionally, secondary considerations, such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.”³ *Id.* When conducting an obviousness analysis, we consider a prior art reference “not only for what it expressly teaches, but also for what it fairly suggests.” *Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1049 (Fed. Cir. 2019).

A patent claim “is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR*, 550 U.S. at 418. An obviousness determination based on a combination of references requires finding “both ‘that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable

³ Patent Owner does not present any arguments regarding objective indicia of nonobviousness at this time. *See generally* Prelim. Resp.

expectation of success in doing so.”” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367–68 (Fed. Cir. 2016) (quoting *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012)); see *KSR*, 550 U.S. at 418 (for an obviousness analysis, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does”).

“Although the *KSR* test is flexible, the Board ‘must still be careful not to allow hindsight reconstruction of references . . . without any explanation as to *how* or *why* the references would be combined to produce the claimed invention.”” *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016) (quoting *Kinetic Concepts*, 688 F.3d at 1368). Further, an assertion of obviousness “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); accord *In re NuVasive, Inc.*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) (stating that “conclusory statements” amount to an “insufficient articulation[] of motivation to combine”; “instead, the finding must be supported by a ‘reasoned explanation’” (quoting *In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002))); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (“To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.”).

C. Level of Ordinary Skill in the Art

Petitioner argues that at the time of the '443 patent (July 2005), a person of ordinary skill in the art would have “had at least a Bachelor’s degree in electrical engineering or a related or equivalent field, and two or more years of experience working with audio systems. However, additional years of education in the above-referenced fields may compensate for fewer years of experience.” Pet. 3 (citing Ex. 1002 ¶ 40). Patent Owner contends that a person of ordinary skill in the art would have had “a bachelor’s degree in electrical engineering or a related subject and two to five years’ experience working with multi-track audio and wireless communications systems in the professional performance industry,” where “[l]ess education may be compensated for by a higher level of work experience.” Prelim. Resp. 9 (citing Ex. 2015 ¶ 15; Ex. 2021 ¶ 11).

Based on the record presented, including our review of the '443 patent and the types of problems and solutions described in the '443 patent and cited prior art, we determine that a person of ordinary skill in the art would have had a Bachelor’s degree in electrical engineering and two or more years of experience working with audio and wireless communications systems, and apply that definition for purposes of this Decision.⁴ See, e.g., Ex. 1001, col. 1, ll. 16–63 (stating in the “Background of Invention” section of the '443 patent that “[e]mbodiments of the present invention generally relate to systems and methods for recording and processing audio received from one or more wireless devices” and describing previous systems to

⁴ To the extent the parties dispute the level of ordinary skill in the art for the '443 patent or the effective filing date of any of the challenged claims, the parties are encouraged to address the issue in their papers during trial.

“record performance audio” and account for “wireless transmission errors”); Ex. 1018, 11–12 (adopting the same definition for purposes of the ’814 patent).

D. Claim Interpretation

We interpret each challenged claim

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b). “In determining the meaning of [a] disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006). Claim terms are given their plain and ordinary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Petitioner “does not currently seek construction of any terms,” and “does not present claim constructions or rebut all of Patent Owner’s constructions” in its Preliminary Reply. *See* Pet. 15; Prelim. Reply 1. Patent

Owner proposes interpretations for seven terms, which we address below.
See Prelim. Resp. 21–29.

1. “Wearable”

Patent Owner argues that “local audio device wearable by a creator of said locally generated audio” in claim 1 means “a local audio device suitable to be worn by the performer who creates the audio that is recorded by that performer’s local audio device.” Prelim. Resp. 24. Petitioner does not provide a proposed interpretation in its Petition or Preliminary Reply.⁵ *See* Pet. 15; Prelim. Reply 1. In the Lectrosonics IPRs, the Board, applying the broadest reasonable interpretation (BRI) standard, interpreted “wearable” in similarly worded claims to mean “suitable and in a condition to be worn.” *See* Ex. 1014, 10–12; Ex. 1017, 10–12; Ex. 1018, 7–9.

We conclude that interpretation of the term “wearable” is necessary to resolve the parties’ dispute. Patent Owner argues that the ’443 patent describes wearability of local audio devices and requires the local audio device to include an audio input device, such as a microphone, that is worn by the performer and connects to the performer’s local audio device to capture the performer’s isolated audio track. Prelim. Resp. 24 (citing Ex. 1001, code (57), col. 7, l. 65–col. 8, l. 4, col. 8, ll. 59–62, col. 21, ll. 60–61). Patent Owner further argues that the prosecution history of the ’443 patent “clarifies that ‘wearable’ requires the audio device to be ‘suitable to be worn by the performer’ and excludes devices that are merely portable (e.g., able to be carried in a backpack).” Prelim. Resp. 24. Patent Owner argues that the Notice of Allowance for the ’443 patent distinguishes

⁵ In the district court case, Petitioner argued that “wearable” means “suitable and in a condition to be worn” and Patent Owner argued that the term means “[s]uitable to be worn by a performer.” *See* Ex. 2006, 13–14.

between “portable” and “wearable” where the prior art of record taught a portable device that could be carried in a backpack, which the Examiner found did not teach a “wearable” limitation of the claims at issue. *Id.* at 25 (citing Ex. 2017).

We agree with Patent Owner’s analysis to the extent it specifies that the audio device is “suitable to be worn,” but do not include “performer” in the interpretation, as claim 1 recites an audio device wearable by a “creator of said locally generated audio.” *See* Prelim. Resp. 24–25. Based on the current record, we interpret “wearable” as “suitable and in a condition to be worn.”

2. “Locally Generated Audio”

Patent Owner argues that “locally generated audio” in claim 1 means “audio created by the wearer of the local audio device receiving the locally generated audio, such audio suitable for use as an independent track of audio.” Prelim. Resp. 22; Prelim. Sur-Reply 3–5. Patent Owner contends that this interpretation requires the creation of “an individual, isolated audio track to be used and independently edited in the resultant multitrack recording,” and any definition that “collects all event audio on a single track of mixed audio without individual, isolated tracks of audio per performer/audio source directly contradicts the requirement for ‘multitrack’ recording.” Prelim. Resp. 22. Petitioner does not propose an alternative interpretation, but argues that Patent Owner’s proposal is overly narrow, as it essentially imports two requirements: (1) that the audio device be actually worn by the creator of the audio; and (2) that the audio be suitable for use as

an independent track of audio. Prelim. Reply 3–4. The Board did not interpret “locally generated audio” in the Lectrosonics IPRs.⁶

We conclude that no express interpretation of “locally generated audio” is necessary to determine whether to institute an *inter partes* review because, even if Patent Owner’s interpretation is adopted, Petitioner has shown sufficiently that Strub teaches “locally generated audio.” *See infra* Section II.E.5.c; *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“Because we need only construe terms ‘that are in controversy, and *only to the extent necessary* to resolve the controversy,’ we need not construe [a particular claim limitation] where the construction is not ‘material to the . . . dispute.’” (citation omitted) (emphasis added)). The parties, however, are encouraged to address interpretation of the phrase during trial.

3. “Master Timecode Generator” and “Master Timecode”

Patent Owner argues that “master timecode generator” should be interpreted to mean “a producer of a master time reference signal that controls at least one other timecode generator” and “master timecode” should be interpreted to mean “a time reference signal used to synchronize at least one device.” Prelim. Resp. 27–28. Petitioner does not provide proposed interpretations for the terms in its Petition or Preliminary Reply.⁷

⁶ In the district court case, Petitioner argued that “locally generated audio” means “analog audio generated local to an audio device,” and Patent Owner argued that the phrase means “[a]udio created by the wearer of the local audio device that is suitable for use as an independent track of audio.” *See* Ex. 2006, 22–23.

⁷ Petitioner argued in the district court case that “master timecode generator” means “a producer of a plurality of master timecodes controlling other time

See Pet. 15; Prelim. Reply 1. In two of the Lectrosonics IPRs, the Board, applying the BRI standard, interpreted “master timecode generator” in similarly worded claims to mean “a producer of a plurality of master timecodes controlling other time code generators.” *See* Ex. 1017, 12–14; Ex. 1018, 9–10. The Board noted that the specifications of the patents at issue “clearly provide[] support for the plain and ordinary meaning of master timecode generator—controlling other time code generators.” *Id.* Patent Owner’s proposed interpretation of “master timecode generator” is very similar to the one previously adopted by the Board.

We agree with Patent Owner that the “master timecode generator” produces a signal that “controls” another timecode generator. *See* Prelim. Resp. 28 (citing a dictionary definition of “master” as “[one] that has control over another or others,” Ex. 2019, 3). We see no basis, however, to limit the claim term to a particular *type* of control. Patent Owner points to Figure 6 of the ’443 patent where “the master timecode generator creates master timecodes that are used to control the speed of the local timecode generator to ensure the two timecode generators are synchronized.” *See* Prelim. Resp. 28 (citing Ex. 1001, col. 15, ll. 4–11, Fig. 6). But Figure 6 merely depicts an exemplary “process for recording audio and for replaying and re-recording segments of missed audio in accordance with one embodiment of the present invention.” *See* Ex. 1001, col. 2, ll. 62–64. Further, the Specification describes the exemplary embodiment of Figure 6 as a master unit providing master timecodes to a local audio device, which “synchronizes (e.g., jam

code generators” or “a producer of a master time reference signal comprising hours, minutes, seconds, and frames, that controls at least one other timecode generator,” and “master timecode” means a “code[] synchronizing audio samples.” *See* Ex. 2006, 9–12.

syncs) its respective on board local timecode generator with the master timecodes,” but does not specify exactly how the master unit exercises control. *Id.* at col. 15, ll. 4–11. Thus, we do not include any particular control mechanism (e.g., changing the speed of the local timecode generator) in our interpretation at this time.⁸

Based on the current record, we interpret “master timecode generator” as “a producer of a master time reference signal that controls at least one other timecode generator” and “master timecode” as “a time reference signal used to synchronize at least one device.”

4. *Other Limitations*

Patent Owner also proposes construing “multi-track data file,” as recited in claim 15 (Prelim. Resp. 25–26); “local audio data is combined electronically to create a single multi-track data file,” as recited in claim 15 (*id.* at 26–27); and “body pack,” as recited in claim 19 (*id.* at 29). As discussed below, *infra* Section II.E.5, because we determine that Petitioner has demonstrated a reasonable likelihood of establishing that claim 1 is unpatentable over Strub, Woo, Negai, and Gleissner, we need not determine at this time whether Petitioner has also shown a reasonable likelihood of prevailing as to claims 15 and 19. *See* 37 C.F.R. § 42.108(a). Accordingly, we do not construe these terms because it is not necessary at this time. *See Nidec*, 868 F.3d at 1017.

⁸ To the extent the parties disagree as to the meaning of “control[]” in the adopted interpretation, the parties are encouraged to address the issue in their papers during trial and, if necessary, provide a more descriptive interpretation for “master timecode generator,” citing support in the Specification and/or prosecution history of the ’443 patent.

E. Ground 1: Obviousness Based on Strub, Woo, Nagai, and Gleissner

Petitioner contends that claims 1–3, 7, 8, 15, 17, 19, 20, and 23–27 are unpatentable over Strub, Woo, Nagai, and Gleissner under 35 U.S.C. § 103(a), citing the testimony of Chris Kyriakakis, Ph.D., as support. Pet. 27–70 (citing Ex. 1002). Patent Owner responds. Prelim. Resp. 30–62. We are persuaded that Petitioner has established a reasonable likelihood of prevailing on its asserted ground as to claim 1. *See* 37 C.F.R. § 42.108(a).

1. Strub

Strub, titled “Hybrid Recording Unit Including Portable Video Recorder and Auxiliary Device,” is directed to “recording of [an] event by multiple participants (i.e., from multiple points of view), often simultaneously.” Ex. 1003, col. 1, ll. 25–31. Strub discloses a “hybrid recording unit” that is “constructed by adding to a portable video recorder (e.g., camcorder, portable dockable videotape recorder (VTR)) one or more devices (an ‘auxiliary device’) that provide additional functionality to the portable video recorder.” *Id.* at col. 5, ll. 23–29. “The auxiliary device can advantageously provide, for example, one or more of the following capabilities: marking, position sensing, physiological monitoring and/or biometric identification.” *Id.* at col. 5, ll. 29–32. The hybrid recording unit is adapted to obtain a visual recording of the event as well as an audio recording of the event. *Id.* at col. 8, ll. 44–52. Multiple hybrid recording units may record a single event and one recording unit may transmit its recording to another recording unit. *Id.* at col. 37, ll. 18–40, col. 38, ll. 8–10.

Figure 1 of Strub is reproduced below.

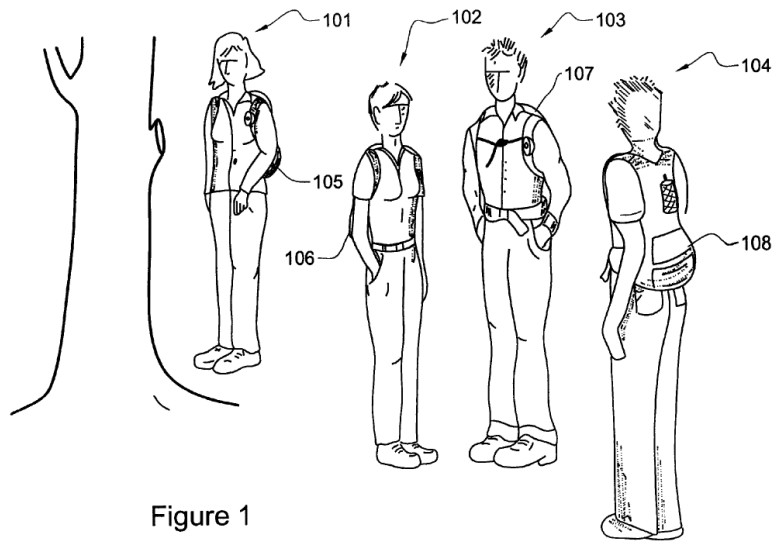


Figure 1

Figure 1 depicts four participants 101–104, equipped with respective recording units 105–108, who “are participating in, or observing, an event.”
Ex. 1003, col. 8, ll. 7–13.

Figure 3 of Strub is reproduced below.

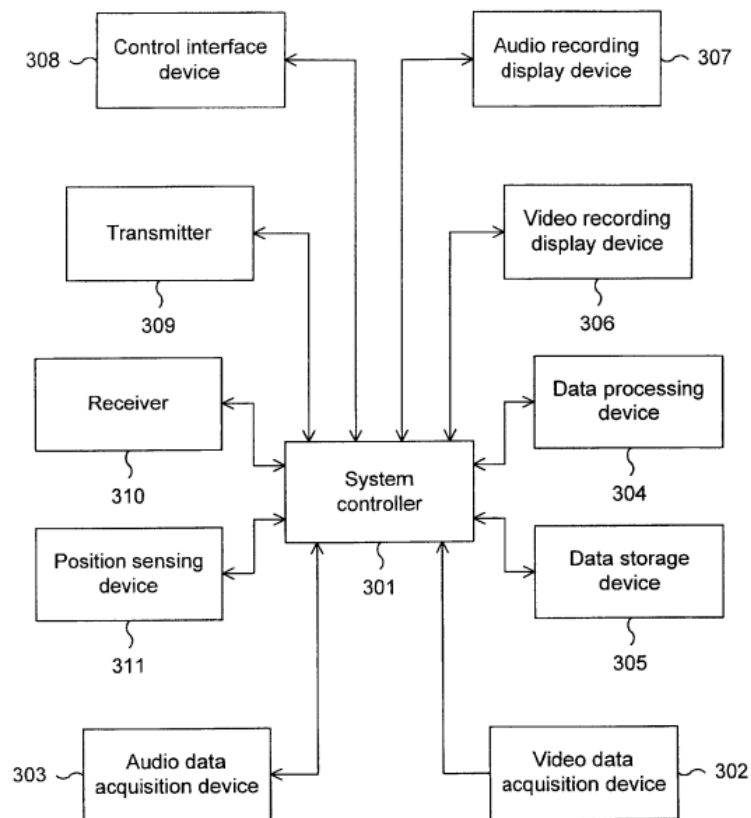


Figure 3 depicts the components of recording unit 300, including system controller 301, audio data acquisition device 303, data storage device 305, and transmitter 309. Ex. 1003, col. 11, l. 57–col. 12, l. 52. “[T]ransmitter 309 transmits signals . . . representing recording data acquired by the recording unit 300, so that such recording data can be used by other recording units (e.g., . . . to enable processing of recording data obtained by the recording unit 300).” *Id.* at col. 12, ll. 31–39. Strub also describes a global positioning system (GPS) receiver in the recording unit

to receive a signal representing the current time that can be used as a clock to generate time-stamps for the recording data. Depending upon the speed of the processing device(s) of the recording unit, the GPS time signal can be updated about once a second. The GPS time signals are extremely accurate; thus, since all of the recording units are receiving this time signal, the time-stamps of all recording units are adequately synchronized.

Though the recording unit must not be constantly blocked from GPS satellites in order for the recording unit to receive such time signals, the recording unit need only be exposed to a GPS satellite for about a minute to enable the time signals to begin. Further, after that point, clock drift occurs slowly, even if the recording unit is blocked from the GPS satellites for a period of time. Additionally, a recording unit according to the invention typically also includes an internal clock, as described above, that, while not as accurate as the GPS time signals, can also be used to accurately time-stamp data.

Id. at col. 63, ll. 41–60.

2. Woo

Woo is directed to a “time-keeping system for synchronizing sound and picture recordings from a plurality of independent recording devices at a shared performance.” Ex. 1004, col. 4, ll. 62–66. The time-keeping system includes a master clock comprising GPS navigation satellite receiver 122 and digital signal processor 124. *Id.* at col. 8, ll. 60–65, Fig. 5. Master clock

output 128 is a SMPTE (Society of Motion Picture and Television Engineers)-formatted timecode that is preferably compatible with commercially available equipment that has master clock input ports. *Id.* at col. 5, ll. 42–53, col. 9, ll. 1–4, Fig. 5.

Figure 1 of Woo is reproduced below.

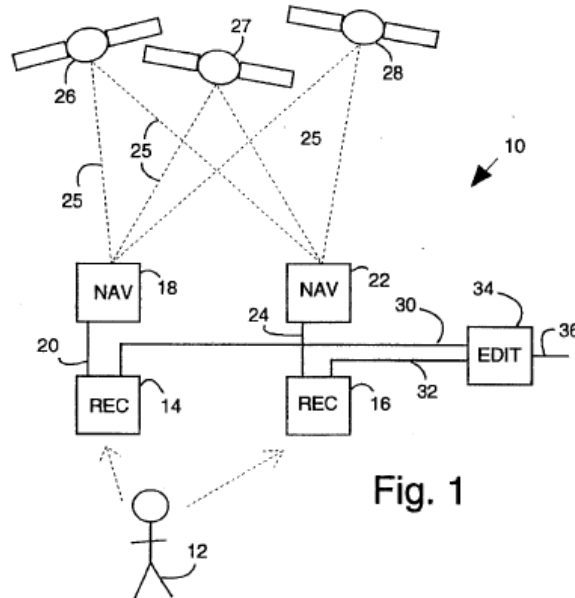


Fig. 1

Figure 1 depicts time-keeping system 10 for “synchronizing sound and picture recordings from a plurality of independent recording devices at a shared performance.” Ex. 1004, col. 4, ll. 62–66. “[R]ecorder 14 captures the performance from its vantage point while another recorder 16 independently captures the same performance from its own vantage point.” *Id.* at col. 5, ll. 3–5. “[N]avigation satellite receivers 18 and 22 receive a plurality of microwave radio transmissions 25 from a constellation of orbiting satellites” 26–28 and provide “highly-accurate date and time information” to recorders 14 and 16 over connections 20 and 24. *Id.* at col. 5, ll. 5–8, 21–30. “The recorders 14 and 16 each transmit their respective recordings over a pair of connections 30 and 32 to an editing station 34,” where “[e]ach recording delivered to the editing station 34 has

been date and time tagged, using date and time information received by the recorders 14 and 16.” *Id.* at col. 5, ll. 37–46.

Figure 5 of Woo is reproduced below.

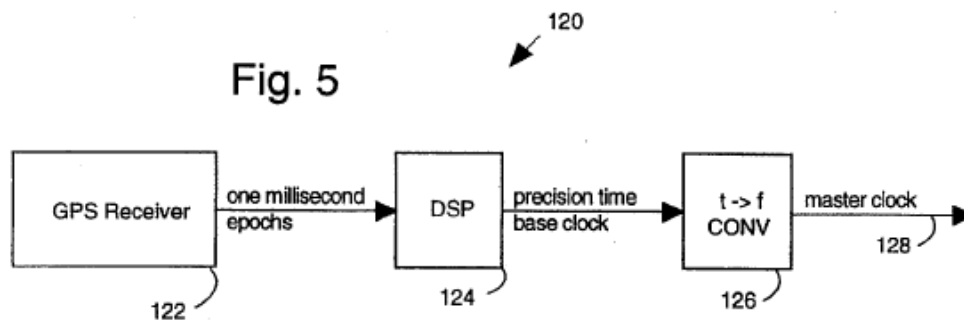


Figure 5 depicts master clock 120 comprising “GPS navigation satellite receiver 122 and . . . digital signal processor 124 for accumulating and averaging code epochs which occur each millisecond in time and having a precision time-base output,” and time-period-to-frequency converter 126 with “precision clock output 128 for synchronizing film and video equipment.” Ex. 1004, col. 8, l. 60–col. 9, l. 1. “[C]lock output 128 is conventionally formatted and distributed, and is preferably compatible with present-day commercially-available equipment that have master clock input ports.” *Id.* at col. 9, ll. 1–4.

3. Nagai

Nagai is directed to a “data recording and reproducing apparatus” for recording and reproducing voice data. Ex. 1005 ¶¶ 2–5. Nagai’s apparatus includes an audio input, a headphone jack for audio output, a memory card to store audio data, and a USB port for transferring audio data to another device. *Id.* ¶¶ 106, 125, 126, 139, 140, 145, Figs. 1, 2A, 2B.

4. *Gleissner*

Gleissner is directed to an audio data recorder that includes a microphone unit and a recording appliance (audio data recorder) connected to one another via a plug connection. Ex. 1006 ¶ 10. The plug connection between the microphone unit and recording appliance provides both an electrical connection and a rigid mechanical connection. *Id.* The recording appliance may further be connected to headphones to allow a user to simultaneously hear the input into the microphone. *Id.* ¶ 33.

5. *Claim 1*

a) *Collateral Estoppel*

Petitioner argues that Patent Owner is collaterally estopped from disputing (1) the presence in the cited references of certain limitations, and (2) the obviousness of combining Strub, Woo, Nagai, and Gleissner, because the issues are identical to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the Lectrosonics IPRs; and Patent Owner had a full and fair opportunity to litigate the issues in the Lectrosonics IPRs. Pet. 9–14 (citing *Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1381 (Fed. Cir. 2022)). Petitioner also argues that Patent Owner is collaterally estopped from relying on “the same or substantially similar objective indicia of [non]obviousness” from the Lectrosonics IPRs in this proceeding for similar reasons. Pet. 14–15.

Patent Owner argues that collateral estoppel does not apply because the Board applied the BRI standard to the claims challenged in the Lectrosonics IPRs, so no claim interpretation was ever rendered under the

Phillips standard and “issues regarding obviousness, which rely on such claim constructions, have also not been litigated.” Prelim. Resp. 19–21 (citing *SkyHawke Techs., LLC v. Deca Int’l Corp.*, 828 F.3d 1373, 1376 (Fed. Cir. 2016)). Patent Owner argues that “[w]here a first IPR is decided under the BRI standard, and a second IPR concerning the same patent is to be decided under the *Phillips* standard, ‘collateral estoppel . . . is not appropriate.’” *Id.* at 20 (citing *Ebates Performance Mktg., Inc. v. Int’l Bus. Machines Corp.*, IPR2022-00646, Paper 56 at 10 (PTAB Oct. 11, 2023)).

We agree with Patent Owner based on the current record. Although the Lectrosonics IPRs involved patents from the same family as the ’443 patent, which recite many similar claim limitations, the Lectrosonics IPRs were all decided using the BRI standard, not the *Phillips* standard. Thus, no claim interpretation has been made using the standard that will be applied in this case, and the asserted prior art has not been applied to claims interpreted according to the standard in this case. Accordingly, on this record, we are not persuaded that collateral estoppel applies to any of the disputed issues in this proceeding. *See DDR Holdings, LLC v. Priceline.com LLC*, 122 F.4th 911, 918–919 (Fed. Cir. 2024) (“‘Because the Board applies the broadest reasonable construction of the claims while the district courts apply a different standard of claim construction as explored in *Phillips*,’ a party is not collaterally estopped in district court proceedings by the Board’s constructions during IPR.”); *SkyHawke*, 828 F.3d at 1376. Regardless, we determine that Petitioner has shown a reasonable likelihood of prevailing on its asserted ground as to claim 1 based on the preliminary claim interpretations applied herein. *See infra* Section II.E.5.h.

b) Undisputed Limitations

Petitioner argues that Strub, Woo, Nagai, and Gleissner collectively teach all of the limitations of claim 1. Pet. 32–59. The preamble of claim 1 recites “[a] system for recording locally generated audio.”⁹ Petitioner contends Strub teaches a plurality of users that wear recording units 105–108, 200, and 300. Pet. 33–34 (citing Ex. 1003, Fig. 1). Petitioner contends each recording unit stores locally generated audio and transmits the audio to a remote device, which also records it. *Id.* at 34. Petitioner contends Woo also teaches the preamble, teaching a system that includes recorder 14/16, GPS receiver 18/22, and time code generator 43 which records locally generated audio and transmits that audio to editing station 34. *Id.* at 35–36.

Claim 1 next recites seven components of the claimed system. Petitioner argues Strub and Woo teach [A] “at least one master timecode generator for generating a plurality of master timecodes” (i.e., Strub’s GPS satellite that transmits GPS time information or SMPTE timecode source that transmits SMPTE time code input; and Woo’s GPS satellites that generate and transmit time clock information). Pet. 37–38.

Petitioner argues Strub teaches [B] “at least one audio device wearable by a creator of said locally generated audio” (i.e., recording units 105–108, 200, and 300 worn by people conversing at an event as depicted in

⁹ On the record before us, we determine that the preamble is limiting at least because the body of the claim refers to the preamble for antecedent basis for the term “locally generated audio.” *See Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.”). Even if it was not, though, limitation 1[F] recites “locally generated audio.”

Figure 1). Pet. 38–39. Petitioner argues Strub and Woo teach [C] “at least one local audio device receiver for wirelessly receiving said master timecodes” (i.e., Strub’s position sensing device 311 that receives GPS time information from a GPS satellite; and Woo’s GPS receiver that receives microwave radio transmissions from one or more of GPS satellites 26–28). Pet. 39–40.

Petitioner argues Strub, Nagai, and Gleissner teach [D] “at least one audio input port for receiving locally generated audio from an audio input device” (i.e., Strub’s audio data acquisition device, or microphone, that is connected to system controller 301; Nagai’s “mike” jack for coupling an external microphone to an audio recorder; and Gleissner’s XLR plug connector for coupling a microphone to an audio recorder). Pet. 41–45.

Petitioner argues Strub teaches [E] “at least one memory” (i.e., Strub’s data storage device 305). Pet. 45–46. Petitioner argues Strub and Woo teach [F] “at least one control unit in communication with said local audio device receiver, said audio input device, and said memory for creating local audio data from said locally generated audio and storing said local audio data in said memory” (i.e., Strub’s system controller 301 and/or data processing device 304 which communicates with the GPS-based position sensing device 311 (the local audio device receiver), the audio input port (the connection to data acquisition device 303) and the memory (data storage device 305); and Woo’s recording devices that store sound and picture recordings). Pet. 47–48.

Petitioner argues Strub and Woo teach [G] “at least one local audio device wireless transmitter for wirelessly transmitting said local audio data in real time, said at least one local audio device wireless transmitter in

communication with said at least one control unit” (i.e., Strub’s wireless transmitter 309 for wirelessly transmitting audio to other mobile recording units; and Woo’s local audio device that transmits locally generated audio by “radio link” to editing station 34). Pet. 49–55.

Claim 1 next recites three wherein clauses relating to the “local audio data.” Petitioner argues Strub and Woo teach [H] “wherein said local audio data includes stamped local audio data and unstamped local audio data” (i.e., Strub’s time stamps and time codes added to the recording data; and Woo’s time codes generated by commercially available time code generator 43, which are used to stamp at least a portion of the local audio data). Pet. 56–57.

Petitioner argues Strub and Woo teach [I] “wherein said stamped local audio data includes at least one timestamp to reference at least a portion of said local audio data to at least one of said master timecodes” (i.e., Strub’s GPS time stamps that are applied to audio data; and Woo’s time codes that are received from a satellite receiver). Pet. 58. Finally, Petitioner argues Strub teaches [J] “wherein said unstamped local audio data does not include a reference to said master timecodes” (i.e., Strub’s audio samples other than the first or final sample for an obtained recording, which have not been stamped). Pet. 58–59.

Patent Owner disputes whether the cited references teach a system for recording “locally generated audio,” a “master timecode generator” as Patent Owner construes the term, and a local audio device “wearable” by a creator of locally generated audio, but does not otherwise dispute the above limitations of claim 1. Prelim. Resp. 31–46. Petitioner’s analysis for the undisputed limitations, supported by the testimony of Dr. Kyriakakis, is

persuasive based on the current record. *See* Pet. 32–59; Ex. 1002 ¶¶ 105–114, 116–123, 128–138, 146–156, 160–165, 168–178.

c) “Locally Generated Audio”: Limitation 1[Pre] and 1[F]

The preamble of claim 1 recites a system for recording “locally generated audio.” In limitation [F], claim 1 further recites “at least one control unit . . . for creating local audio data from said locally generated audio and storing said local audio data in said memory.” Petitioner identifies as “locally generated audio” the audio that is captured by Strub’s recording units 105–108, 200, and 300. Pet. 33–34. Petitioner more specifically identifies Strub’s system controller 301 as acquiring locally generated audio via audio data acquisition device 303 and storing the audio as local audio data in data storage device 305. *Id.* at 48–49.

Petitioner also identifies as “locally generated audio” the audio that is captured by Woo’s local audio device comprising recorder 14/16, GPS receiver 18/22, and time code generator 43. *Id.* at 35–36. Petitioner argues Woo’s system stores locally generated audio in memory as local audio data. *Id.* at 49.

Patent Owner argues that Strub and Woo teach “the opposite of ‘locally generated audio’” because their audio is “locally ‘received’ or ‘heard’ by a recorder,” not “generated, or created, by the recorder.” Prelim. Resp. 33 (citing Ex. 1003, col. 22, ll. 16–33; Ex. 1004, col. 5, ll. 3–5). Patent Owner asserts that this “heard” audio is not suitable for multi-track recording because it “does not include individual, isolated tracks of audio” for each performer that can be independently edited. *Id.* (quoting Ex. 2015 ¶ 157; citing Ex. 2021 ¶ 15).

Petitioner argues that even under Patent Owner's construction, Strub teaches "locally generated audio." Prelim. Reply 5. In particular, Petitioner argues that Strub teaches recording units that "may be 'worn' by a person 'participating in' as opposed to merely 'observing' an event." *Id.* (citing Ex. 1003, code (57), col. 1, ll. 24–35, col. 8, ll. 6–26, col. 11, ll. 3–17, Fig. 1). According to Petitioner, Strub provides examples, such as participants singing "Happy Birthday," playing ping pong, and participating in a group hike or family trip to an amusement park. *Id.* (citing Ex. 1003, col. 2, ll. 55–65, col. 47, ll. 33–39, col. 52, ll. 19–24, col. 67, l. 59–col. 68, l. 2). Petitioner argues that each audio device records "an independent track of audio' distinct from the recordings of other devices since they are not co-located and would receive sound differently." *Id.* Petitioner contends that Patent Owner provides no evidence that multiple voices, including those of people not wearing the audio device, "cannot be recorded as an independent audio track." *Id.*

We disagree with Patent Owner's arguments based on the current record. Although Strub describes embodiments where the focus of the recording performed by the audio device is on sounds primarily in front of the recorder, as cited by Patent Owner, *see* Prelim. Resp. 33 (citing Ex. 1003, col. 22, ll. 16–33), Petitioner also has identified embodiments where the audio device captures audio created by the wearer of the device, *see* Prelim. Reply 5. Indeed, Strub refers to the recorder's participation in the event being recorded repeatedly throughout its disclosure, providing multiple examples as Petitioner points out. *See id.*

At this stage, we find that Petitioner has made a sufficient showing that Strub teaches "locally generated audio" as recited in claim 1.

d) “*Master Timecode Generator*” and “*Master Timecode*”:
Limitation 1[A]

Limitation 1[A] recites “at least one master timecode generator for generating a plurality of master timecodes.” As explained above, we interpret “master timecode generator” as “a producer of a master time reference signal that controls at least one other timecode generator,” and “mastertimecode” as “a time reference signal used to synchronize at least one device.” *See supra* Section II.D.3.

Petitioner argues that “Strub discloses receiving a master timecode—*e.g.*, GPS time information—from a master timecode generator—*e.g.*, a GPS satellite or SMPTE timecode source.” Pet. 38 (citing Ex. 1003, col. 62, l. 26–col. 63, l. 60, col. 75, ll. 25–57). Petitioner further contends that “Woo also discloses master timecode generators—GPS satellites 26–28—for generating a plurality of master timecodes.” *Id.* (citing, *e.g.*, Ex. 1004, col. 5, ll. 5–10, 21–29, col. 7, ll. 26–47, col. 8, l. 60–col. 9, l. 4, Figs. 2–4; Ex. 1002 ¶ 153). And Petitioner provides reasons why a person of ordinary skill in the art would have been motivated to modify Strub’s system to incorporate Woo’s synchronization methods. *Id.* at 27–28. At this stage, we find that Petitioner has made a sufficient showing that Woo teaches limitation 1[A].¹⁰

¹⁰ As explained above, Petitioner alternatively argues that Strub alone teaches the limitation, and the parties make various arguments regarding Strub’s disclosure. *See* Pet. 37–38; Prelim. Resp. 43–45; Prelim. Reply 1–3; Prelim. Sur-Reply 1–3. We need not evaluate Petitioner’s alternative arguments regarding Strub at this time, given Petitioner’s showing regarding the combination with Woo.

Patent Owner, relying on the testimony of Mr. DeFilippis, argues that “Woo’s ‘master clock’ is not a ‘master timecode generator for generating a plurality of master timecodes.’” Prelim. Resp. 45 (quoting Ex. 2015 ¶ 181). Patent Owner contends that “there is no mention of any such secondary timecode generator in Woo, let alone that they are controlled by Woo’s master clock.” *Id.* Mr. DeFilippis explains that “[t]he mere disclosure of a master clock and master clock input ports on commercially-available equipment does not nearly meet the requirements of the claimed ‘master timecode generator’ that is a producer of a master time reference signal that controls at least one other timecode generator.” *Id.* (quoting Ex. 2015 ¶ 182). Mr. DeFilippis further opines that Woo needs to combine the time output of its GPS receiver with “a highly accurate pulse because the output of the GPS receiver is insufficient to achieve synchronization,” whereas the ’443 patent “teaches timecodes having sufficient data to synchronize audio segments.” *Id.* at 45–46 (quoting Ex. 2015 ¶ 183; citing Ex. 1004, col. 4, ll. 16–20, col. 8, ll. 13–18).

We disagree based on the current record. Woo teaches providing master timecodes in SMPTE format for the purpose of synchronizing recorded data from independent sound, film, and video recorders. *See* Ex. 1004, codes (54), (57), col. 3, ll. 20–24, col. 4, ll. 13–15; Pet. 52–53. As shown in Figure 5, “master” clock 120, comprising GPS navigation satellite receiver 122, digital signal processor 124, and time-period-to-frequency converter 126, receives a GPS time signal and provides a “precision clock output . . . for synchronizing film and video equipment.” Ex. 1004, col. 8, l. 60–col. 9, l. 1. Woo further describes the “slave” or “jam-sync” process, which “allows a time code generator to *follow* the time

code off another source.” *Id.* at col. 3, ll. 38–41 (emphasis added), col. 7, ll. 29–38 (“A commercially-available time code generator 43 . . . generates time code[s] . . . and will jam to both the output connection 38 and normal SMPTE/EBU time code.”). Thus, based on the current record, Petitioner has explained sufficiently how Woo’s GPS satellites 26–28 (the “master timecode generator”) transmit time clock information, or time codes, to receivers 18 and 22 (“a plurality of master timecodes”). *See* Pet. 38; Prelim. Reply 3.

Patent Owner also makes various arguments in its Preliminary Sur-Reply pertaining to the issue of “control” of the local timecode generator. *See* Prelim. Sur-Reply 1–2. Patent Owner contends that the GPS signals in Strub and Woo “provide time information to their internal clocks” but “do not exercise control over *how the internal clocks operate (e.g., the speed of such clocks)*.” *Id.* at 1 (emphasis added). Likewise, Patent Owner argues that “the reliability of a GPS time signal . . . is entirely contingent upon continuous signal availability because Strub and Woo do not teach the ability of the GPS signals to control *the operation of the internal clocks*.” *Id.* at 2 (emphasis added). As explained above, we preliminarily interpret “master timecode generator” to mean “a producer of a master time reference signal that controls at least one other timecode generator,” but do not limit the term to any particular type of control. *See supra* Section II.D.3. On this record, we do not see any requirement in the claim that the master time reference signal control the *operation* of an internal clock of the local timecode generator (e.g., by modifying the speed of such a clock). Limitation 1[A] merely recites that at least one master timecode generator generates a plurality of master timecodes. Also, to the extent Patent Owner

asserts that the master timecode generator must itself “control[] how the local timecode generator operates,” we disagree; our preliminary interpretation specifies that it is the master time reference *signal* that “controls” the other timecode generator. *See* Prelim. Sur-Reply 1–2; Ex. 2015 ¶¶ 50, 93.

Next, relying on the testimony of Mr. Norflus, Patent Owner argues that “GPS or satellite reception of time code[s] is unreliable and not a viable solution for the transmission or reception of timecode[s],” as “[t]here are many instances where receiving a GPS signal would just not be possible” (e.g., “recording studios” or “underground locations”). Prelim. Resp. 46 (quoting Ex. 2021 ¶ 27); Prelim. Sur-Reply 2–3. The ’443 patent, by contrast, “provides for accurate transmission of master timecodes in all locations including those not accessible by satellite signals” according to Patent Owner. Prelim. Resp. 46. Claim 1, however, does not include any requirement for synchronization from “all” locations or instances—the relevant question is whether the device based on the combined teachings of Strub and Woo would have a “master timecode generator for generating a plurality of master timecodes.” Based on Woo’s disclosure discussed above regarding GPS satellites 26–28 generating and transmitting time clock information, or time codes, to receivers 18 and 22, Petitioner has made a sufficient showing on this record. *See, e.g.*, Ex. 1004, col. 3, ll. 38–41, col. 7, ll. 27–53, col. 8, l. 60–col. 9, l. 4, Figs. 1, 3, 5.

At this stage, we find that Petitioner has made a sufficient showing that Woo teaches limitation 1[A].

e) “Wearable” Local Audio Device: Limitation 1[B]

Petitioner argues that Strub’s recording units, shown in Figures 1 and

3, for example, are “wearable” by a user, as recited in the limitation [B] of claim 1. Pet. 38–39. As explained above, we interpret “wearable” to mean “suitable and in a condition to be worn.” *See supra* Section II.D.1.

Patent Owner argues that Petitioner has not established that Strub teaches a “local audio device wearable by a creator of said locally generated audio.” Prelim. Resp. 36. Patent Owner argues that Strub teaches different variations of recording units, some of which Patent Owner calls the “Basic Strub Recording Unit” and some of which Patent Owner calls the “Advanced Strub Recording Unit.” *Id.* Patent Owner argues that Strub describes recording units 105–108 and recording unit 200 as Basic Strub Recording Units without any mention of a receiver, a transmitter, or an ability to transmit or receive data. *Id.* (citing Ex. 1003, col. 8, ll. 13–29, Fig. 2). Patent Owner argues that Strub describes recording unit 300 as an Advanced Strub Recording Unit that includes a transmitter and receiver, for which data acquisition is performed by a video data acquisition device and an audio data acquisition device, instead of the single data acquisition device of the Basic Strub Recording Units. *Id.* (citing Ex. 1003, col. 11, ll. 48–50, col. 12, ll. 13–16).

According to Patent Owner, Petitioner cites recording unit 300 as the “audio device” recited in claim 1, but cites Figure 1, which only refers to recording units 105–108, to show wearability of the recording units. Prelim. Resp. 37 (citing Pet. 38–39). Patent Owner argues that recording units 105–108 cannot be equated to the local audio device of claim 1 because these Basic Strub Recording Units do not contain a transmitter and receiver and Petitioner has made no showing of Strub teaching an Advanced Strub Recording Unit that contains a transmitter and receiver and is also wearable.

Id. at 37–38. In support of this argument, Patent Owner proffers that Strub (1) at col. 4, ll. 21–31 teaches a Basic Strub Recording Unit with no receiver or transmitter; (2) at col. 14, l. 59–col. 15, l. 11 and col. 16, l. 66–col. 17, l. 24 describes wearability of a visual acquisition device, not the recording unit, which shows that the visual acquisition device is not wearable because it must be attached to a wearable apparatus; (3) at col. 38, l. 65–col. 39, l. 11 describes wearability of an audio communication device, not a recording unit; (4) at col. 66, ll. 33–51 describes a data acquisition device, which is used in the Basic Strub Recording Unit, and this device may not even be wearable; and (5) at col. 67, l. 54–col. 68, l. 10 and col. 72, ll. 9–19 refers to the wearability of a Basic Strub Recording Unit with no receiver or transmitter. Prelim. Resp. 38–39.

We disagree with Patent Owner’s arguments based on the current record. Patent Owner cites various disclosures in Strub, arguing that they break down into two categories—Basic and Advanced Strub Recording Units. But this distinction is not supported by Strub’s teachings. As cited by Petitioner (*see* Pet. 39), Strub teaches that its recording units may include many potential combinations of components and that the goal of packaging these components together is to achieve a small, light, unobtrusive recording unit that is comfortable to wear, *see* Ex. 1003, col. 66, ll. 33–51. Petitioner identifies teachings in Strub regarding potential components of recording units, including communications devices such as the transmitter and receiver. *See* Pet. 51 (citing Ex. 1003, col. 35, l. 51–col. 36, l. 29). Petitioner identifies teachings in Strub indicating that it would be desirable to include many of these components in a single apparatus that is easily worn. *See id.* at 39 (citing Ex. 1003, col. 4, ll. 21–31 (describing “a small,

lightweight, wearable recording unit”), col. 66, ll. 33–51 (disclosing goals of making the recording unit “small,” “comfortable to wear,” and “as lightweight as possible”)). Strub teaches that certain components may be excluded from this apparatus to keep the recording unit as compact as possible, but the transmitter and receiver are not included in this exclusion list. Ex. 1003, col. 66, ll. 33–51. Accordingly, Patent Owner’s argument that Strub distinguishes between two categories of recording units such that Petitioner errs by relying on “Basic Strub Recording Units” for wearability is unsupported on the current record.

Moreover, the visual and audio acquisition devices described by Patent Owner as separate from the recording unit may be internal components of the recording unit or may be connected to a recording unit that is worn by a recorder. Claim 1 recites “at least one local audio device wearable by a creator of said locally generated audio including . . . at least one audio input port for receiving locally generated audio from an audio input device.” In other words, the audio input device may be separate from the claimed audio device that is wearable by a user for storing locally generated audio.

Finally, to the extent Patent Owner asserts that Strub’s recording units are not suitable to be worn by a “performer” because “they are too large, visible, heavy, and imposing to be worn during the filming of performances,” we are not persuaded, because we have interpreted “wearable” more broadly, to require only a “creator of locally generated audio.” *See* Prelim. Resp. 40–41; *supra* Section II.D.1.

At this stage, we find that Petitioner has made a sufficient showing that Strub teaches a “wearable” audio device as recited in claim 1.

f) Analogous Art

Patent Owner argues that Strub and Woo¹¹ are non-analogous art because they are neither in the same field of endeavor as the claimed invention nor reasonably pertinent to the problems faced by the inventors of the '443 patent. Prelim. Resp. 59–60. Patent Owner contends that Strub and Woo are not in “the field of multi-track recording.” *Id.* at 59. Patent Owner argues Strub is in the field of “low attention, social recording,” and “Woo discloses a ‘GPS receiver [that] comprises a data output port for communicating time code information formatted according to standards.’” *Id.* at 59–60. Patent Owner argues that the claimed invention “does not mention any ‘GPS satellite or receiver; it instead relates to using a master timecode generator to control other timecode generators in other recorders” and “GPS signals are known to be incompatible with performance recording as many recording locations . . . are not capable of receiving satellite signals.” *Id.* at 60 (quoting Ex. 2015 ¶ 204; citing Ex. 2021 ¶ 27).

“A reference qualifies as prior art for an obviousness determination under § 103 only when it is analogous to the claimed invention.” *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011). “Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not

¹¹ Patent Owner also argues Winningstad, relied upon in Ground 2 for claims 4 and 9, is non-analogous art to the claimed invention. Prelim. Resp. 59–60. As discussed below, *infra* Section II.F, we need not determine at this time whether Petitioner has shown a reasonable likelihood of prevailing as to the unpatentability of claims 4 and 9. Accordingly, we also need not determine at this time whether Winningstad is non-analogous art to the claimed invention.

within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

Based on the current record, we are persuaded that Strub and Woo satisfy both tests. The '443 patent describes a field of endeavor of synchronizing different recordings of a live performance. *See, e.g.*, Ex. 1001, col. 1, ll. 15–17 (“Embodiments of the present invention generally relate to systems and methods for recording and processing audio received from one or more wireless devices.”). Strub and Woo are from the same field. *See, e.g.*, Ex. 1003, col. 1, ll. 26–31 (“The invention . . . relates to recording an event in which multiple persons participate . . . [and] recording of the event by multiple participants (i.e., from multiple points of view), often simultaneously.”), col. 52, ll. 18–24 (describing “a recording of a birthday party” involving “the singing of ‘Happy Birthday’”); Ex. 1004, codes (54) (“Time-Keeping System and Method for Synchronizing Independent Recordings of a Live Performance in Post-Recording Editing”), (57) (describing “time code information . . . input to independent sound, film and video recorders at a performance event to create tracks on each recording for re-synchronizing the pictures and sounds in post-performance editing”). We disagree that the field of endeavor is limited to “professional” sound recording as Patent Owner contends. *See* Prelim. Resp. 59–60; *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1001 (Fed. Cir. 2016) (“The field of endeavor of a patent is not limited to the specific point of novelty, the narrowest possible conception of the field, or the particular focus within a given field.”).

The '443 patent also addresses problems with synchronization of audio from multiple recording devices using timecodes or timestamps (e.g., in the case of transmission errors for a particular audio track). *See, e.g.*, Ex. 1001, col. 1, ll. 15–62, col. 4, ll. 28–37 (“[s]ynchronization is essential to ensure that each performer’s audio is synchronized with all other performers’ audio” and “must maintain a high accuracy for each performer’s timestamps with respect to all other performers’ timestamps”). Strub and Woo are reasonably pertinent to the problem of synchronization. *See, e.g.*, Ex. 1003, col. 63, ll. 41–60 (“the time-stamps of all recording units are adequately synchronized”), col. 75, ll. 47–51; Ex. 1004, code (57), col. 4, l. 62–col. 5, l. 53 (describing SMPTE timecodes and jam synchronization). And the fact that both references utilize GPS signals as part of their respective *methods* of synchronization does not undermine the pertinence of the references to the general problem of synchronization of audio from different recording devices. *See* Prelim. Resp. 59–60; *Innovation Toys, LLC v. MGA Entm’t, Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011) (“A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.”).

g) Reasons to Combine

Petitioner argues that it would have been obvious to modify Strub’s recording unit to use “conventional SMPTE-formatted timecodes from Woo’s master clock,” which “would involve nothing more than combining familiar elements according to known methods to improve Strub’s system and yield predictable results.” Pet. 28 (citing Ex. 1002 ¶ 107). Petitioner

points out various similarities between the Strub and Woo systems and asserts that Woo “provides express motivations to use its synchronization methods in a wireless, multi-recorder system such as Strub’s.” *Id.* at 27–28. In particular, Petitioner contends that “Woo’s master clock (1) provides accurate synchronization across recorders, (2) can generate coordinated timecodes at independent sites, (3) is simple to connect to the recorders, and (4) provides standardized, SMPTE-compatible timecodes.” *Id.* at 28 (citing Ex. 1004, col. 4, ll. 3–44).

Petitioner further argues that the ’443 patent “sought to solve the problem of matching the timing between multiple recordings produced by one or more wireless devices” by “generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp the locally recorded audio data.” Pet. 30 (citing, e.g., Ex. 1001, col. 4, ll. 3–26, col. 4, l. 52–col. 5, l. 10). Petitioner asserts that “Strub and Woo recognized and solved that same problem in the same way,” pointing to the references’ disclosures regarding synchronization using GPS time signals. *Id.* (citing, e.g., Ex. 1003, col. 62, l. 26–col. 63, l. 60; Ex. 1004, code (57), col. 4, ll. 13–19, col. 5, ll. 5–10, col. 7, ll. 26–50).

Patent Owner’s arguments in response are largely premised on an alleged failure of Strub and Woo¹² to teach certain claim limitations. *See*

¹² Patent Owner also argues an ordinarily skilled artisan would not have been motivated to combine Winningstad with Strub and Woo. Prelim. Resp. 55–58. As noted above, Winningstad is only relied upon in Ground 2 for claims 4 and 9. Because we need not determine at this time whether Petitioner has shown a reasonable likelihood of prevailing as to the unpatentability of claims 4 and 9, we also need not determine at this time

Prelim. Resp. 55–57. Patent Owner disputes that a person of ordinary skill in the art would have combined the teachings of Strub and Woo to solve the “dropout problem” because the references do not teach “multi-track recording,” as they “capture single tracks of mixed audio that do not include individual tracks of audio per performer/audio source.” *Id.* at 55. Based on the current record, we disagree with Patent Owner’s assertion that the references do not teach “locally generated audio,” for the reasons explained above. *See supra* Section II.E.5.c.

Similarly, Patent Owner argues that an ordinarily skilled artisan would not have combined Strub and Woo because the approaches followed by the two references “substantially differ from each other and the claimed invention.” Prelim. Resp. 56 (quoting Ex. 2015 ¶ 198). According to Patent Owner, Strub discloses “a GPS time signal that produces time stamps but does not control another timecode generator or produce a time reference signal used to synchronize at least one device,” and Woo discloses a master clock with a GPS navigation satellite receiver and digital signal processor. *Id.* Again, based on the current record, we disagree with Patent Owner’s assertion that the references do not teach a “master timecode generator” producing a master time reference signal that controls a local timecode generator, for the reasons explained above. *See supra* Section II.E.5.d. And, although the specific synchronization functionality is different in the references, Strub and Woo are similar in that they both teach receiving a GPS time signal and using it for synchronization. *See* Pet. 37–38.

whether an ordinarily skilled artisan would have been motivated to combine Winningstad with Strub and Woo.

Finally, Patent Owner argues that “Strub already discloses a solution to post-production editing (i.e., participants share their locally recorded audio after a recorded event),” so “applying the Woo solution in post-production in Strub would have been unnecessary.” Prelim. Resp. 57 (quoting Ex. 2015 ¶ 201; citing Ex. 1003, col. 80, ll. 52–58). We disagree on this record. Petitioner provides multiple reasons for why a person of ordinary skill in the art would have found it desirable to modify Strub’s system to use the synchronization method of Woo, including that Woo’s system produces “accurate synchronization across recorders,” generates “coordinated timecodes at independent sites,” is “simple to connect,” and provides timecodes in a format compatible with commercially available equipment, with supporting testimony from Dr. Kyriakakis. *See* Pet. 28; Ex. 1002 ¶ 107; *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004) (“‘[T]he question is whether there is something in the prior art as a whole to suggest the *desirability*, and thus the obviousness, of making the combination,’ not whether there is something in the prior art as a whole to suggest that the combination is the *most desirable* combination available.”). Petitioner also explains how Strub and Woo address the same problem of synchronization of audio from multiple recording devices, again with supporting testimony. *See* Pet. 30; Ex. 1002 ¶ 111; *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (“That [two references] address the same problem and that [one reference’s teaching] was a known way to address that problem is precisely the reason that there [is] a motivation to combine under *KSR* . . .”). Petitioner has made a sufficient showing as to the combination of Strub and Woo based on the current record.

As to the further combination with Nagai and Gleissner, Petitioner argues that a person of ordinary skill in the art would have been motivated to use Nagai and Strub's well-known standard connectors in Strub's local audio device "because of their popularity, especially since Strub recommends specific brands of commercially available microphone—*e.g.*, a Sanken CSS-5—which were configured to be plugged into an input port." Pet. 28–29 (citing Ex. 1003, col. 25, ll. 35–49).

Patent Owner responds that modifying Strub's system based on Nagai or Gleissner would change the principle of operation of Strub or render it unsuitable for its intended purpose. Prelim. Resp. 60–62. In particular, Patent Owner argues that Strub's intended purpose is "low attention, social recording that allows multiple recorders to record the same event from multiple viewpoints." *Id.* at 61 (citing Ex. 1003, code (57)). Patent Owner argues that Petitioner's proposed modification of Strub to incorporate Nagai's audio input port (a mic jack) or Gleissner's conventional audio input port (an XLR plug connector) "would cause each Strub recorder to record only the recorder's audio" via the audio input port, "which would result in only one audio recording for any given event despite the number of recorders or possible viewpoints." *Id.*

We disagree with Patent Owner's arguments based on the current record. Strub discloses that its audio device may include an "audio data acquisition device," such as a "lavalier microphone." *See* Pet. 41–42 (citing Ex. 1003, col. 68, l. 63–col. 69, l. 67). Petitioner alleges that an ordinarily skilled artisan would have understood Strub to teach a "microphone [that] is not soldered/hard-wired, but connected through an audio input port such as a microphone jack/plug." *Id.* at 42. Petitioner proposes incorporating Nagai's

mic jack or Gleissner's XLR plug connector as an "audio input port," to the extent Strub does not teach such a port. *Id.* at 43–45. Thus, the proposed modification does not necessarily change the operation of the audio data acquisition device itself, only its physical connection to the wearable audio device. Patent Owner's argument that the proposed modification would change the manner of recording thus is not commensurate with the scope of Petitioner's proposed combination.

Petitioner has made a sufficient showing as to the combination of Strub and Woo with Nagai and Gleissner based on the current record.

h) Conclusion

Petitioner's contentions regarding the combination of Strub, Woo, Nagai, and Gleissner are supported by the testimony of Dr. Kyriakakis and are persuasive based on the current record. *See* Pet. 32–59; Ex. 1002 ¶¶ 105–114, 116–123, 128–138, 146–156, 160–165, 168–178. Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 1 is unpatentable over Strub, Woo, Nagai, and Gleissner. Accordingly, we institute review "on all of the challenged claims and on all grounds of unpatentability asserted for each claim." *See* 37 C.F.R. § 42.108(a).

6. Claims 2, 3, 7, 8, 15, 17, 19, 20, and 23–27

Claims 2, 3, 7, 8, 15, 17, 19, 20, and 23–27 depend from claim 1. Patent Owner does not argue dependent claims 2, 3, 7, 8, 17, 20, and 23–27 separately from claim 1. Prelim. Resp. 31–55. However, Patent Owner argues that Petitioner has failed to establish that Strub, Woo, Nagai, and Gleissner teach the limitations of claim 15 or claim 19. *Id.* at 47–55. On

this record, we disagree with Patent Owner's arguments regarding independent claim 1 and are persuaded that Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 1 is unpatentable over Strub, Woo, Nagai, and Gleissner. *See supra* Section II.E.5. Accordingly, we need not determine at this time whether Petitioner also has shown a reasonable likelihood of prevailing as to any of the other challenged claims. *See* 37 C.F.R. § 42.108(a).

F. Grounds 2 and 3

Petitioner relies on the combination of Strub, Woo, Nagai, Gleissner, and Winningstad to present a challenge of obviousness for claims 4 and 9. Pet. 71–75 (Ground 2). Petitioner relies on the combination of Strub, Woo, Nagai, Gleissner, and Dwyer to present a challenge of obviousness for claim 22. *Id.* at 75–80 (Ground 3). Patent Owner makes various arguments regarding the asserted combination with Winningstad. Prelim. Resp. 55–60, 62. Because we have found that Petitioner has established a reasonable likelihood of prevailing on its assertion that claim 1 is unpatentable over Strub, Woo, Nagai, and Gleissner, we need not determine at this time whether Petitioner also has shown a reasonable likelihood of prevailing as to any of the other grounds. *See* 37 C.F.R. § 42.108(a).

III. CONCLUSION

Based on the arguments presented in the Petition, we conclude that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one claim of the '443 patent challenged in the Petition. Accordingly, we institute a trial on all challenged claims (i.e., claims 1–4, 7–9, 15, 17, 19, 20, and 22–27) and all grounds asserted with respect to those

claims in the Petition. The Board has not made a final determination under 35 U.S.C. § 318(a) with respect to the patentability of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–4, 7–9, 15, 17, 19, 20, and 22–27 of the '443 patent is instituted with respect to all grounds set forth with respect to those claims in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '443 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

IPR2025-00230
Patent 7,711,443 B1

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Exhibit B

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RØDE MICROPHONES, LLC, and
FREEDMAN ELECTRONICS PTY LTD.,
Petitioner,

v.

ZAXCOM, INC.,
Patent Owner.

IPR2025-00231
Patent 7,929,902 B1

Before JUSTIN T. ARBES, MIRIAM L. QUINN, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

PER CURIAM.

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

I. INTRODUCTION

A. Background and Summary

RØDE Microphones, LLC, and Freedman Electronics Pty Ltd.
(collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–6, 9, 10, 13, and 16–20 of U.S. Patent No. 7,929,902 B1 (Ex. 1001, “the ’902 patent”) pursuant to 35 U.S.C.

§ 311(a). Patent Owner Zaxcom, Inc. filed a Preliminary Response (Paper 8, “Prelim. Resp.”) pursuant to 35 U.S.C. § 313. Also, pursuant to our authorization (Paper 9), Petitioner filed a Preliminary Reply (Paper 10, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-Reply (Paper 11, “Prelim. Sur-Reply”).

Pursuant to our authorization provided by email (Ex. 3003), Patent Owner filed a motion to terminate on the basis that the Petition is time-barred under 35 U.S.C. § 315(b). Papers 15 (confidential), 16 (public redacted). Petitioner filed its response on June 5, 2025. Paper 20. The parties’ briefing did not permit sufficient time to decide the motion prior to the three-month statutory deadline for determining whether to institute an *inter partes* review. *See* 35 U.S.C. § 314(b). We express no opinion at this time on Patent Owner’s motion to terminate, which will be decided in due course.

Pursuant to 35 U.S.C. § 314(a), the Director may not authorize an *inter partes* review unless the information in the petition and preliminary response “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” *See* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”). For the reasons that follow, we institute an *inter partes* review as to claims 1–6, 9, 10, 13, and 16–20 of the ’902 patent on all grounds of unpatentability asserted with respect to those claims in the Petition.

B. Related Matters

The parties indicate that the ’902 patent is the subject of *Zaxcom, Inc. v. RØDE Microphones, LLC, et al.*, No. 1:23-cv-01245-JFM (D. Del.) (“the

district court case”). *See* Pet. xi; Paper 6, 2. Petitioner filed petitions challenging other patents related to the ’902 patent and asserted in the district court case: U.S. Patent No. 7,711,443 B1 (“the ’443 patent”) (IPR2025-00230), U.S. Patent No. 10,276,207 B1 (IPR2025-00232), and U.S. Patent No. 12,051,444 B2 (IPR2025-00557).

The ’902 patent previously was challenged by a different petitioner, Lectrosonics, Inc. In IPR2018-01129, the Board found challenged claims 7, 8, 11, 12, 14, and 15 of the ’902 patent unpatentable and granted Patent Owner’s motion to amend seeking to add proposed substitute claims 21–26. Ex. 1017.

Two other patents related to the ’902 patent previously were also challenged by Lectrosonics, Inc. In IPR2018-00972, the Board found challenged claims 1–14 of U.S. Patent No. 9,336,307 B2 (Ex. 1015, “the ’307 patent”) unpatentable and granted Patent Owner’s motion to amend seeking to add proposed substitute claims 15–28. Ex. 1014.

In IPR2018-01130, the Board found challenged claims 1–4, 9, 10, 12, 15, 31, 36, 37, and 41–45 of U.S. Patent No. 8,385,814 B2 (Ex. 1028, “the ’814 patent”) unpatentable and granted Patent Owner’s motion to amend seeking to add proposed substitute claims 50–65. Ex. 1018.

In each of the three cases, the Board’s final written decision was affirmed, and the Office issued *inter partes* review certificates cancelling the challenged claims and adding the substitute claims. *See* Pet. 12; Exs. 1015, 1028, 1030; *Zaxcom, Inc. v. Lectrosonics, Inc.*, No. 2020-1350, 2022 WL 499843 (Fed. Cir. Feb. 18, 2022); *Zaxcom, Inc. v. Lectrosonics, Inc.*, No. 2020-1921, 2022 WL 499848 (Fed. Cir. Feb. 18, 2022). We refer to the earlier proceedings as “the Lectrosonics IPRs.”

C. The '902 Patent

The '902 patent discloses a system and method “for wirelessly recording multi-track audio files without the data corruption or loss of data that typically occurs with wireless data transmission.” Ex. 1001, code (57). Figure 1 of the '902 patent is reproduced below.

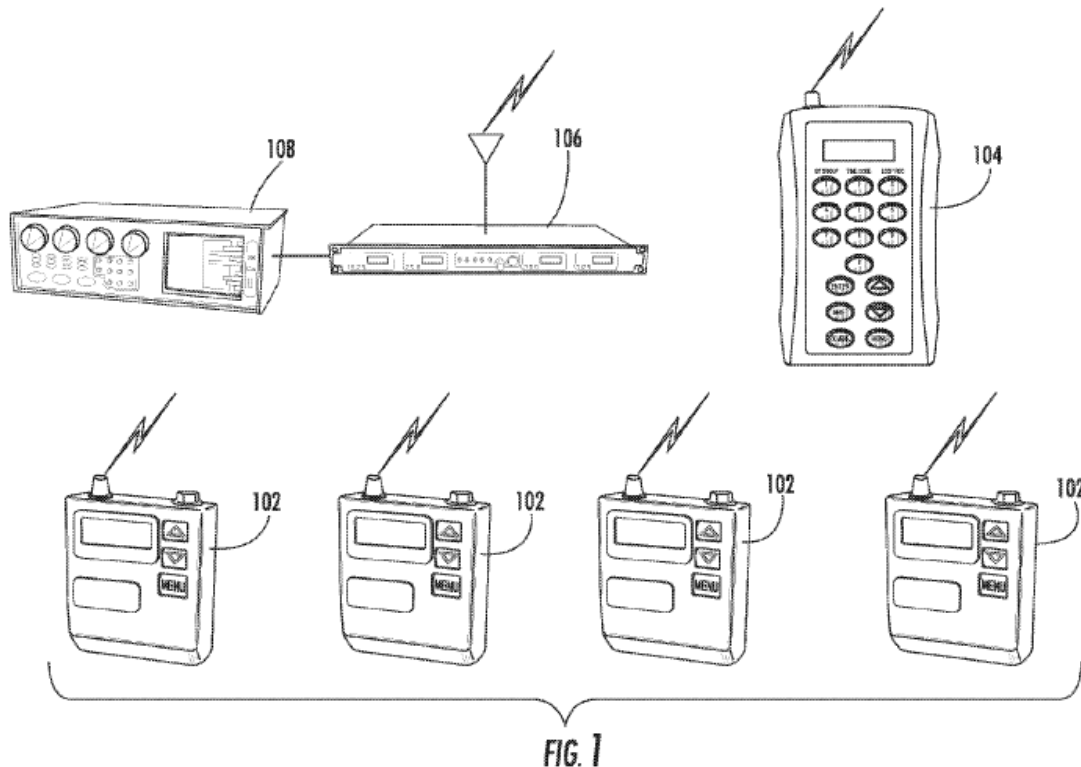


Figure 1 depicts recording system 100, which “wirelessly records audio events, such as performances, movie takes, etc. having one or more performers.” Ex. 1001, col. 4, ll. 12–14. “[R]ecording system 100 includes local audio devices 102, remote control unit (‘RCU’) 104, receiver 106, and recorder 108.” *Id.* at col. 4, ll. 38–40. Local audio devices 102 record live audio and store the audio in memory using timestamps that are synchronized with the timestamps of recorder 108. *Id.* at col. 4, ll. 20–25. Local audio devices 102 may transmit both live and replayed audio to receiver 106 to be recorded by audio recorder 108. *Id.* at col. 4, ll. 50–52. “RCU 104 includes

an RF transmitter capable of transmitting one or more of a time reference signal, digital commands, and audio to one or more other components of recording system 100.” *Id.* at col. 4, ll. 40–43. The RCU may remotely control local audio devices 102, receiver 106, and recorder 108 for “initiating audio playback of all local audio devices 102 starting at the same time reference, as well as recording thereof by receiver 106 and recorder 108.” *Id.* at col. 4, ll. 47–49.

D. Illustrative Claims

Challenged claims 1 and 17 of the ’902 patent are independent. Claims 2–6, 9, and 10 depend from claim 1. Claims 13 and 16 depend from independent claim 12, which has not been challenged. Claims 18–20 depend from claim 17. Claim 1 recites the following (with letter designations used in the Petition to refer to the various limitations):

1. [Pre] A system for recording locally generated audio comprising:

[A] at least one master timecode generator for generating a plurality of master timecodes; and

[B] at least one local audio device wearable by a creator of said locally generated audio including:

[C] at least one local audio device receiver for receiving at least one of the group consisting of digital commands, said master timecodes, and non-local audio data;

[D] at least one audio input port for receiving locally generated audio from an audio input device;

[E] at least one memory;

[F] at least one control unit in communication with said local audio device receiver, said audio input device, and said memory for creating local audio data from said locally generated audio and storing said local audio data in said memory; and

[G] wherein said local audio data includes stamped local audio data and unstamped local audio data;

[H] wherein said stamped local audio data includes at least one timestamp to reference at least a portion of said local audio data to at least one of said master timecodes; and

[I] wherein said unstamped local audio data does not include a reference to said master timecodes.

E. Evidence

Petitioner relies on the following prior art:

U.S. Patent No. 5,479,351, issued Dec. 26, 1995 (Ex. 1004, “Woo”);

U.S. Patent No. 6,825,875 B1, issued Nov. 30, 2004 (Ex. 1003, “Strub”);

U.S. Patent No. 7,493,437 B1, issued Feb. 17, 2009 (Ex. 1010, “Jones”);

U.S. Patent Application Publication No. 2002/0159179 A1, published Oct. 31, 2002 (Ex. 1005, “Nagai”); and

U.S. Patent Application Publication No. 2004/0028241 A1, published Feb. 12, 2004 (Ex. 1006, “Gleissner”).

F. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–6, 9, 10, 13, and 16–20 of the ’902 patent would have been obvious on the basis of prior art printed publications under 35 U.S.C. § 103(a) on the following grounds:¹

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. The ’902 patent claims priority to an application filed before the effective date of the applicable AIA amendment, and Petitioner refers to the pre-AIA version of 35 U.S.C. § 102; therefore, we refer to the pre-AIA version of 35 U.S.C. § 103. *See* Pet. 14, 16, 18, 19, 20; Ex. 1001, code (22).

Reference(s)	Basis	Challenged Claims
Strub, Woo, Nagai, Gleissner	§ 103	1–3, 6, 13, 16
Strub, Woo, Nagai, Gleissner, Jones	§ 103	4, 5, 9, 10
Strub, Woo	§ 103	17–20

II. ANALYSIS

A. Discretionary Denial Under 35 U.S.C. § 314(a)

Institution of *inter partes* review is discretionary. *See 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 [*inter partes* review (IPR)] proceeding.”); 35 U.S.C. § 314(a) (“The Director *may not* authorize an *inter partes* review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” (emphasis added)). Patent Owner argues that we should exercise our discretion to deny the Petition in view of the district court case. Prelim. Resp. 9–19. Petitioner disagrees. Pet. 75–78.

The Board has held that the advanced state of a parallel district court action is a factor that may weigh in favor of denying a petition under § 314(a). *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential); Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019), 58 & n.2, *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>. We consider the

following factors to assess “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding”:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential). In evaluating these factors, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

1. Whether the Court Granted a Stay or Evidence Exists That One May Be Granted if a Proceeding is Instituted

Patent Owner contends that a stay has not been requested in the district court case and, if requested, would be “unlikely” to be granted. Prelim. Resp. 10. Petitioner contends that Petitioner “intends to seek a stay” of the district court case, but without specific evidence how the court will rule, this factor is neutral. *See* Pet. 75–76 (citing *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking, LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative)).

We decline to speculate whether the district court will grant a stay. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative). Thus, we find that factor 1 is neutral.

2. *Proximity of the Court’s Trial Date to the Board’s Projected Statutory Deadline for a Final Written Decision*

Patent Owner argues that although a trial date has not been set in the district court case, it is reasonable to assume that the trial will occur “during 2026.” Prelim. Resp. 16. Patent Owner argues that the statutory deadline for the final written decision in the last of the related proceedings (IPR2025-00557) is one year from the date of potential institution thereof, which would be no earlier than September 18, 2026. *Id.*

Petitioner argues that this factor weighs against exercising our discretion because “the final summary judgment and Daubert briefs [in the district court case] are not due until April 10, 2026,” so “it is extremely unlikely that trial will start in or before June 2026.” Pet. 76.

Patent Owner focuses on the statutory deadline for the final written decision in IPR2025-00557 (if instituted), but the statutory deadline for the final written decision in this proceeding would be in June 2026. There is no trial date set in the district court case. *See Ex. 1031, 3.* Therefore, we find that factor 2 weighs against exercising discretion to deny institution.

3. *Investment in the Parallel Proceeding by the Court and the Parties*

Patent Owner argues that the parties have expended significant time and resources in the district court case, including substantially completing document production on February 5, 2025. Prelim. Resp. 12, 16. Patent Owner argues that claim construction briefing is set to be completed on June

20, 2025, fact discovery closes on August 15, 2025, expert discovery closes on January 23, 2026, and summary judgment and Daubert briefing is scheduled to conclude by April 10, 2026. *Id.* at 12. Patent Owner argues that the significant time and resources expended in the district court case were necessitated by Petitioner's delay in filing its petitions in this proceeding and the related proceedings "until the eve of the statutory deadlines, despite knowledge of [Patent Owner's] claims for over 44 months prior thereto." *Id.* at 17. Patent Owner argues that institution in this proceeding would result in expensive duplication of effort. *Id.*

Petitioner argues that this factor weighs against exercising discretion because fact discovery does not end until August 2025, claim construction and expert discovery have not yet begun, a trial date has not been set, and no substantive orders have been issued related to the challenged patent. Pet. 77.

We agree with Petitioner that much work remains in the district court case as it relates to validity because discovery is in its early stages, claim construction briefing is not yet complete, and a *Markman* hearing has not yet occurred. *See* Ex. 1031, 3. Petitioner filed the Petition approximately fourteen months after Patent Owner filed its original complaint in the district court case, but less than one month after Patent Owner filed its amended complaint. *See* Pet. xi; Prelim. Resp. 2; Exs. 2001, 2002. Although the filing of the Petition does not seem diligent, the timing overall does not outweigh the limited investment in the district court case. Given that limited investment, we determine that this factor weighs slightly against exercising discretion to deny institution.

4. *Overlap Between Issues Raised in the Petition and in the Parallel Proceeding*

Patent Owner contends that there is “100% overlap between the issues in the Petition and the [district court case], which both rely on identical prior art references and arguments.” Prelim. Resp. 17.

Petitioner argues that although all of the challenged claims are currently being asserted in the district court case, the district court recently issued a revised scheduling order which requires Patent Owner to reduce its asserted claims before the *Markman* hearing and after the *Markman* ruling. Pet. 77. Petitioner argues that in light of this reduction, and the overall number of asserted claims, it is likely that many of the challenged claims will not be asserted in the district court case. *Id.* Patent Owner disagrees with this assertion, arguing that it is “pure speculation” because the district court has continued to refuse to force Patent Owner to narrow the number of asserted claims. Prelim. Resp. 18 (citing Ex. 2012).

We decline to speculate whether the claims asserted in the district court case will be narrowed sufficiently that the overlap between the challenged claims and the asserted claims substantially changes. We find that this factor weighs in favor of exercising discretion to deny institution.

5. *Whether the Petitioner and the Defendant in the Parallel Proceeding Are the Same Party*

Patent Owner contends that the parties to this proceeding are the same parties in the district court case. Prelim. Resp. 18. Petitioner agrees, and argues that this factor may depend on which tribunal is likely to address the challenged patent first, which Petitioner contends is the Board. Pet. 78. Because the parties in this proceeding and the district court case are the

same, we find that this factor weighs in favor of exercising discretion to deny institution.

6. Other Circumstances that Impact the Board's Exercise of Discretion, Including the Merits

Petitioner argues that the “strong showing on the merits” in the Petition weighs against exercising discretion to deny institution, citing the previous USPTO Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022), *available at* https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf. Pet. 75, 78.

Patent Owner argues that the Office’s revocation of the Memorandum,² which “eliminates ‘compelling evidence of patentability’ as a criterion for refusing to deny institution, moots [Petitioner’s] argument.” Prelim. Resp. 19. Patent Owner argues that the merits in this proceeding are “not a close call” and other factors favoring denial are present, including the district court case that “has 100% overlap with the issues in this Petition” and “also includes 3 additional patents and 66 additional claims.” *Id.*

The issues raised by Petitioner are similar to those raised in the Lectrosonics IPRs. In IPR2018-01129, similar claims in the ’902 patent were found unpatentable over Strub, Nagai, Gleissner, and Woo. In

² See USPTO Memorandum, Guidance on USPTO’s Recission of “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation” (March 24, 2025), *available at* https://www.uspto.gov/sites/default/files/documents/guidance_memo_on_interim_procedure_recission_20250324.pdf.

IPR2018-00972, similar claims in a related patent were found unpatentable over Strub, Nagai, and Gleissner. In IPR2018-01130, similar claims in a related patent were found unpatentable over Strub, Nagai, Gleissner, and Woo. In each of these cases, many of the same issues were decided, albeit under a different claim construction standard.

In view of the totality of the circumstances, this factor weighs against exercising discretionary denial.

7. Conclusion

Having considered the factors above, including the timing of the proceedings, the amount of overlap and additional patents and claims in the district court case, the amount of effort that has been and is yet to be expended in the district court case, and the merits of Petitioner's challenges, we find that, taken as a whole, the factors do not favor exercising discretion to deny institution. Although the overlapping parties and issues with the district court case weigh in favor of discretionary denial, the lack of any trial date, limited investment in the district court case, and similarity to claims previously held unpatentable by this tribunal weigh against exercising our discretion, and the remaining factor regarding a potential stay is neutral. Accordingly, we decline to exercise discretion to deny institution under § 314(a).

B. Legal Standards

A claim is unpatentable for obviousness if, to one of ordinary skill in the pertinent art, "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). The question of obviousness is resolved on the basis of underlying factual

determinations, including “the scope and content of the prior art”; “differences between the prior art and the claims at issue”; and “the level of ordinary skill in the pertinent art.” *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Additionally, secondary considerations, such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.”³ *Id.* When conducting an obviousness analysis, we consider a prior art reference “not only for what it expressly teaches, but also for what it fairly suggests.” *Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1049 (Fed. Cir. 2019).

A patent claim “is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR*, 550 U.S. at 418. An obviousness determination based on a combination of references requires finding “both ‘that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367–68 (Fed. Cir. 2016) (quoting *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012)); *see KSR*, 550 U.S. at 418 (for an obviousness analysis, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does”).

³ Patent Owner does not present any arguments regarding objective indicia of nonobviousness at this time. *See generally* Prelim. Resp.

“Although the *KSR* test is flexible, the Board ‘must still be careful not to allow hindsight reconstruction of references . . . without any explanation as to *how* or *why* the references would be combined to produce the claimed invention.” *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016) (quoting *Kinetic Concepts*, 688 F.3d at 1368). Further, an assertion of obviousness “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); accord *In re NuVasive, Inc.*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) (stating that “conclusory statements” amount to an “insufficient articulation[] of motivation to combine”; “instead, the finding must be supported by a ‘reasoned explanation’” (quoting *In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002))); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (“To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.”).

C. Level of Ordinary Skill in the Art

Petitioner argues that at the time of the ’902 patent (July 2005), a person of ordinary skill in the art would have “had at least a Bachelor’s degree in electrical engineering or a related or equivalent field, and two or more years of experience working with audio systems. However, additional years of education in the above-referenced fields may compensate for fewer years of experience.” Pet. 3 (citing Ex. 1002 ¶ 40). Patent Owner contends that a person of ordinary skill in the art would have had “a bachelor’s degree

in electrical engineering or a related subject and two to five years' experience working with multi-track audio and wireless communications systems in the professional performance industry," where "[l]ess education may be compensated for by a higher level of work experience." Prelim. Resp. 9 (citing Ex. 2015 ¶ 15, Ex. 2021 ¶ 11).

Based on the record presented, including our review of the '902 patent and the types of problems and solutions described in the '902 patent and cited prior art, we determine that a person of ordinary skill in the art would have had a Bachelor's degree in electrical engineering and two or more years of experience working with audio and wireless communications systems, and apply that definition for purposes of this Decision.⁴ See, e.g., Ex. 1001, col. 1, l. 26–col. 2, l. 6 (stating in the "Background of Invention" section of the '902 patent that "[e]mbodiments of the present invention generally relate to systems and methods for recording and processing audio received from one or more wireless devices" and describing previous systems to "record performance audio" and account for "wireless transmission errors"); Ex. 1017, 15 (adopting the same definition for purposes of the '902 patent in IPR2018-01129).

D. Claim Interpretation

We interpret each challenged claim

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of

⁴ To the extent the parties dispute the level of ordinary skill in the art for the '902 patent or the effective filing date of any of the challenged claims, the parties are encouraged to address the issue in their papers during trial.

ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b). “In determining the meaning of [a] disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006). Claim terms are given their plain and ordinary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Petitioner “does not currently seek construction of any terms,” and “does not present claim constructions or rebut all of Patent Owner’s constructions” in its Preliminary Reply. *See* Pet. 14; Prelim. Reply 1. Patent Owner proposes interpretations for eight terms, which we address below. *See* Prelim. Resp. 21–29.

1. “Wearable”

Patent Owner argues that “local audio device wearable by a creator of said locally generated audio” in claim 1 means “a local audio device suitable to be worn by the performer who creates the audio that is recorded by that performer’s local audio device.” Prelim. Resp. 24. Petitioner does not

provide a proposed interpretation in its Petition or Preliminary Reply.⁵ *See* Pet. 14; Prelim. Reply 1. In the Lectrosonics IPRs, the Board, applying the broadest reasonable interpretation (BRI) standard, interpreted “wearable” in similarly worded claims to mean “suitable and in a condition to be worn.” *See* Ex. 1014, 10–12; Ex. 1017, 10–12; Ex. 1018, 7–9.

We conclude that interpretation of the term “wearable” is necessary to resolve the parties’ dispute. Patent Owner argues that the ’902 patent describes wearability of local audio devices and requires the local audio device to include an audio input device, such as a microphone, that is worn by the performer and connects to the performer’s local audio device to capture the performer’s isolated audio track. Prelim. Resp. 24–25 (citing Ex. 1001, code (57), col. 6, ll. 47–51, col. 10, ll. 7–10, 40–41, col. 11, ll. 46–50, col. 23, ll. 45–46, col. 24, ll. 60–61). Patent Owner further argues that the prosecution history of the ’443 patent, the parent of the ’902 patent, “clarifies that ‘wearable’ requires the audio device to be ‘suitable to be worn by the performer’ and excludes devices that are merely portable (e.g., able to be carried in a backpack).” Prelim. Resp. 25. Patent Owner argues that the Notice of Allowance for the ’443 patent distinguishes between “portable” and “wearable” where the prior art of record taught a portable device that could be carried in a backpack, which the Examiner found did not teach a “wearable” limitation of the claims at issue. *Id.* at 25 (citing Ex. 2017).

We agree with Patent Owner’s analysis to the extent it specifies that the audio device is “suitable to be worn,” but do not include “performer” in

⁵ In the district court case, Petitioner argued that “wearable” means “suitable and in a condition to be worn” and Patent Owner argued that the term means “[s]uitable to be worn by a performer.” *See* Ex. 2006, 13–14.

the interpretation, as claim 1 recites an audio device wearable by a “creator of said locally generated audio.” *See* Prelim. Resp. 24–26. Based on the current record, we interpret “wearable” as “suitable and in a condition to be worn.”

2. “Locally Generated Audio” and “Local Audio”

Patent Owner argues that “locally generated audio” in claim 1 and “local audio” in claims 13 and 16–20 mean “audio created by the wearer of the local audio device receiving the locally generated audio, such audio suitable for use as an independent track of audio.” Prelim. Resp. 22; Prelim. Sur-Reply 3–5. Patent Owner contends that this interpretation requires the creation of “an individual, isolated audio track to be used and independently edited in the resultant multitrack recording,” and any definition that “collects all event audio on a single track of mixed audio without individual, isolated tracks of audio per performer/audio source directly contradicts the requirement for ‘multitrack’ recording.” Prelim. Resp. 22–23. Petitioner does not propose an alternative interpretation, but argues that Patent Owner’s proposal is overly narrow, as it essentially imports two requirements: (1) that the audio device be actually worn by the creator of the audio; and (2) that the audio be suitable for use as an independent track of audio. Prelim. Reply 3–4. The Board did not interpret “locally generated audio” or “local audio” in the Lectrosonics IPRs.⁶

⁶ In the district court case, Petitioner argued that “locally generated audio” means “analog audio generated local to an audio device” and Patent Owner argued that the phrase means “[a]udio created by the wearer of the local audio device that is suitable for use as an independent track of audio.” *See* Ex. 2006, 22–23.

We conclude that no express interpretation of “locally generated audio” or “local audio” is necessary to determine whether to institute an *inter partes* review because, even if Patent Owner’s interpretation is adopted, Petitioner has shown sufficiently that Strub teaches “locally generated audio” as recited in claim 1. *See infra* Section II.E.5.c; *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“Because we need only construe terms ‘that are in controversy, and *only to the extent necessary* to resolve the controversy,’ we need not construe [a particular claim limitation] where the construction is not ‘material to the . . . dispute.’” (citation omitted) (emphasis added)). The parties, however, are encouraged to address interpretation of the phrases during trial.

3. “Master Timecode Generator” and “Master Timecode”

Patent Owner argues that “master timecode generator” should be interpreted to mean “a producer of a master time reference signal that controls at least one other timecode generator” and “master timecode” should be interpreted to mean “a time reference signal used to synchronize at least one device.” Prelim. Resp. 31. Petitioner does not provide proposed interpretations for the terms in its Petition or Preliminary Reply.⁷ *See* Pet. 14; Prelim. Reply 1. In IPR2018-01129, the Board, applying the BRI

⁷ Petitioner argued in the district court case that “master timecode generator” means “a producer of a plurality of master timecodes controlling other time code generators” or “a producer of a master time reference signal comprising hours, minutes, seconds, and frames, that controls at least one other timecode generator,” and “master timecode” means a “code[] synchronizing audio samples.” *See* Ex. 2006, 9–12.

standard, interpreted “master timecode generator” in claim 7 of the ’902 patent to mean “a producer of a plurality of master timecodes controlling other time code generators.” *See* Ex. 1017, 12–14. The Board noted that the specification of the ’902 patent “clearly provides support for the plain and ordinary meaning of master timecode generator—controlling other time code generators.” *Id.* In another of the Lectrosonics IPRs, the Board applied the same interpretation in similarly worded claims. *See* Ex. 1018, 9–10. Patent Owner’s proposed interpretation of “master timecode generator” is very similar to the one previously adopted by the Board.

We agree with Patent Owner that the “master timecode generator” produces a signal that “controls” another timecode generator. *See* Prelim. Resp. 31 (citing a dictionary definition of “master” as “[one] that has control over another or others,” Ex. 2019, 3). We see no basis, however, to limit the claim term to a particular *type* of control. Patent Owner points to Figure 6 of the ’902 patent where “the master timecode generator creates master timecodes that are used to control the speed of the local timecode generator to ensure the two timecode generators are synchronized.” *See* Prelim. Resp. 31–32 (citing Ex. 1001, col. 16, ll. 30–37, Fig. 6). But Figure 6 merely depicts an exemplary “process for recording audio and for replaying and re-recording segments of missed audio in accordance with one embodiment of the present invention.” *See* Ex. 1001, col. 3, ll. 57–59. Further, the Specification describes the exemplary embodiment of Figure 6 as a master unit providing master timecodes to a local audio device, which “synchronizes (e.g., jam syncs) its respective on board local timecode generator with the master timecodes,” but does not specify exactly how the master unit exercises control. *Id.* at col. 16, ll. 30–37. Thus, we do not

include any particular control mechanism (e.g., changing the speed of the local timecode generator) in our interpretation at this time.⁸

Based on the current record, we interpret “master timecode generator” as “a producer of a master time reference signal that controls at least one other timecode generator” and “master timecode” as “a time reference signal used to synchronize at least one device.”

4. *Other Limitations*

Patent Owner also proposes construing “at least a portion of said local audio data . . . is combined with said remote audio data,” as recited in claims 13 and 16 (Prelim. Resp. 26–31); “local audio data for each of said performers is retrieved from said local audio devices and is combined to create a single multi-track audio file,” as recited in claims 17–20 (*id.*); and “multi-track audio file” as recited in claims 17–20 (*id.* at 32–33). As discussed below, *infra* Section II.E.5.h, because we determine that Petitioner has demonstrated a reasonable likelihood of establishing that claim 1 is unpatentable over Strub, Woo, Negai, and Gleissner, we need not determine at this time whether Petitioner has also shown a reasonable likelihood of prevailing as to claims 13 and 16–20. *See* 37 C.F.R. § 42.108(a).

Accordingly, we do not construe these terms because it is not necessary at this time. *See Nidec*, 868 F.3d at 1017.

⁸ To the extent the parties disagree as to the meaning of “control[]” in the adopted interpretation, the parties are encouraged to address the issue in their papers during trial and, if necessary, provide a more descriptive interpretation for “master timecode generator,” citing support in the Specification and/or prosecution history of the ’902 patent.

E. Ground 1: Obviousness Based on Strub, Woo, Nagai, and Gleissner

Petitioner contends that claims 1–3, 6, 13, and 16 are unpatentable over Strub, Woo, Nagai, and Gleissner under 35 U.S.C. § 103(a), citing the testimony of Chris Kyriakakis, Ph.D., as support. Pet. 21–60 (citing Ex. 1002). Patent Owner responds. Prelim. Resp. 33–61. We are persuaded that Petitioner has established a reasonable likelihood of prevailing on its asserted ground as to claim 1. *See* 37 C.F.R. § 42.108(a).

1. Strub

Strub, titled “Hybrid Recording Unit Including Portable Video Recorder and Auxiliary Device,” is directed to “recording of [an] event by multiple participants (i.e., from multiple points of view), often simultaneously.” Ex. 1003, col. 1, ll. 25–31. Strub discloses a “hybrid recording unit” that is “constructed by adding to a portable video recorder (e.g., camcorder, portable dockable videotape recorder (VTR)) one or more devices (an ‘auxiliary device’) that provide additional functionality to the portable video recorder.” *Id.* at col. 5, ll. 23–29. “The auxiliary device can advantageously provide, for example, one or more of the following capabilities: marking, position sensing, physiological monitoring and/or biometric identification.” *Id.* at col. 5, ll. 29–32. The hybrid recording unit is adapted to obtain a visual recording of the event as well as an audio recording of the event. *Id.* at col. 8, ll. 44–52. Multiple hybrid recording units may record a single event and one recording unit may transmit its recording to another recording unit. *Id.* at col. 37, ll. 18–40, col. 38, ll. 8–10.

Figure 1 of Strub is reproduced below.

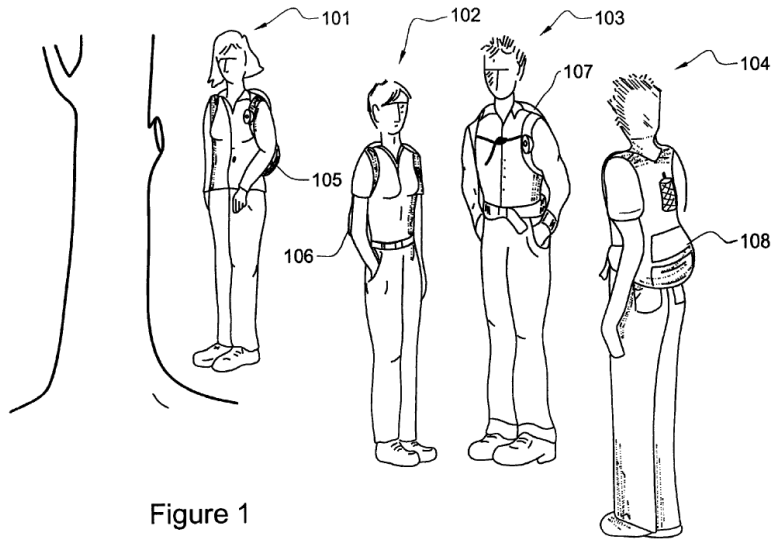


Figure 1

Figure 1 depicts four participants 101–104, equipped with respective recording units 105–108, who “are participating in, or observing, an event.”
Ex. 1003, col. 8, ll. 7–13.

Figure 3 of Strub is reproduced below.

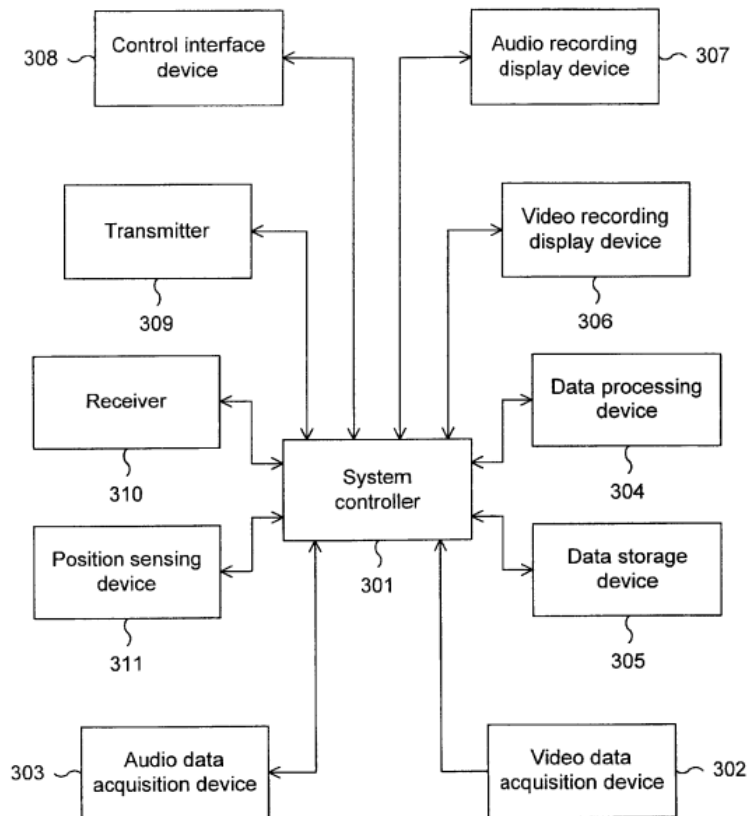


Figure 3 depicts the components of recording unit 300, including system controller 301, audio data acquisition device 303, data storage device 305, and transmitter 309. Ex. 1003, col. 11, l. 57–col. 12, l. 52. “[T]ransmitter 309 transmits signals . . . representing recording data acquired by the recording unit 300, so that such recording data can be used by other recording units (e.g., . . . to enable processing of recording data obtained by the recording unit 300).” *Id.* at col. 12, ll. 31–39. Strub also describes a global positioning system (GPS) receiver in the recording unit

to receive a signal representing the current time that can be used as a clock to generate time-stamps for the recording data. Depending upon the speed of the processing device(s) of the recording unit, the GPS time signal can be updated about once a second. The GPS time signals are extremely accurate; thus, since all of the recording units are receiving this time signal, the time-stamps of all recording units are adequately synchronized.

Though the recording unit must not be constantly blocked from GPS satellites in order for the recording unit to receive such time signals, the recording unit need only be exposed to a GPS satellite for about a minute to enable the time signals to begin. Further, after that point, clock drift occurs slowly, even if the recording unit is blocked from the GPS satellites for a period of time. Additionally, a recording unit according to the invention typically also includes an internal clock, as described above, that, while not as accurate as the GPS time signals, can also be used to accurately time-stamp data.

Id. at col. 63, ll. 41–60.

2. *Woo*

Woo is directed to a “time-keeping system for synchronizing sound and picture recordings from a plurality of independent recording devices at a shared performance.” Ex. 1004, col. 4, ll. 62–66. The time-keeping system includes a master clock comprising GPS navigation satellite receiver 122 and digital signal processor 124. *Id.* at col. 8, ll. 60–65, Fig. 5. Master clock

output 128 is a SMPTE (Society of Motion Picture and Television Engineers)-formatted timecode that is preferably compatible with commercially available equipment that has master clock input ports. *Id.* at col. 5, ll. 42–53, col. 9, ll. 1–4, Fig. 5.

Figure 1 of Woo is reproduced below.

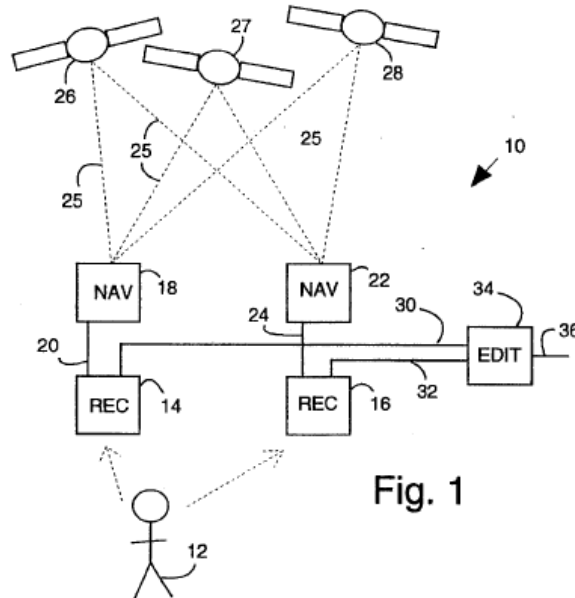


Fig. 1

Figure 1 depicts time-keeping system 10 for “synchronizing sound and picture recordings from a plurality of independent recording devices at a shared performance.” Ex. 1004, col. 4, ll. 62–66. “[R]ecorder 14 captures the performance from its vantage point while another recorder 16 independently captures the same performance from its own vantage point.” *Id.* at col. 5, ll. 3–5. “[N]avigation satellite receivers 18 and 22 receive a plurality of microwave radio transmissions 25 from a constellation of orbiting satellites” 26–28 and provide “highly-accurate date and time information” to recorders 14 and 16 over connections 20 and 24. *Id.* at col. 5, ll. 5–8, 21–30. “The recorders 14 and 16 each transmit their respective recordings over a pair of connections 30 and 32 to an editing station 34,” where “[e]ach recording delivered to the editing station 34 has

been date and time tagged, using date and time information received by the recorders 14 and 16.” *Id.* at col. 5, ll. 37–46.

Figure 5 of Woo is reproduced below.

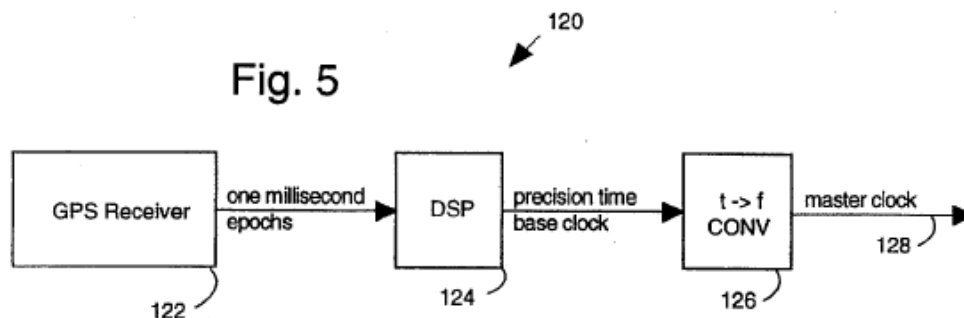


Figure 5 depicts master clock 120 comprising “GPS navigation satellite receiver 122 and . . . digital signal processor 124 for accumulating and averaging code epochs which occur each millisecond in time and having a precision time-base output,” and time-period-to-frequency converter 126 with “precision clock output 128 for synchronizing film and video equipment.” Ex. 1004, col. 8, l. 60–col. 9, l. 1. “[C]lock output 128 is conventionally formatted and distributed, and is preferably compatible with present-day commercially-available equipment that have master clock input ports.” *Id.* at col. 9, ll. 1–4.

3. Nagai

Nagai is directed to a “data recording and reproducing apparatus” for recording and reproducing voice data. Ex. 1005 ¶¶ 2–5. Nagai’s apparatus includes an audio input, a headphone jack for audio output, a memory card to store audio data, and a USB port for transferring audio data to another device. *Id.* ¶¶ 106, 125, 126, 139, 140, 145, Figs. 1, 2A, 2B.

4. *Gleissner*

Gleissner is directed to an audio data recorder that includes a microphone unit and a recording appliance (audio data recorder) connected to one another via a plug connection. Ex. 1006 ¶ 10. The plug connection between the microphone unit and recording appliance provides both an electrical connection and a rigid mechanical connection. *Id.* The recording appliance may further be connected to headphones to allow a user to simultaneously hear the input into the microphone. *Id.* ¶ 33.

5. *Claim 1*

a) *Collateral Estoppel*

Petitioner argues that Patent Owner is collaterally estopped from disputing (1) the presence in the cited references of certain limitations and (2) the obviousness of combining Strub, Woo, Nagai, and Gleissner, because the issues are identical to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the Lectrosonics IPRs; and Patent Owner had a full and fair opportunity to litigate the issues in the Lectrosonics IPRs. Pet. 8–13 (citing *Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1381 (Fed. Cir. 2022)). Petitioner also argues that Patent Owner is collaterally estopped from relying on “the same or substantially similar objective indicia of [non]obviousness” from the Lectrosonics IPRs in this proceeding for similar reasons. Pet. 13–14.

Patent Owner argues that collateral estoppel does not apply because the Board applied the BRI standard to the claims challenged in the Lectrosonics IPRs, so no claim interpretation was ever rendered under the

Phillips standard and “issues regarding obviousness, which rely on such claim constructions, have also not been litigated.” Prelim. Resp. 19–21 (citing *SkyHawke Techs., LLC v. Deca Int’l Corp.*, 828 F.3d 1373, 1376 (Fed. Cir. 2016)). Patent Owner argues that “[w]here a first IPR is decided under the BRI standard, and a second IPR concerning the same patent is to be decided under the *Phillips* standard, ‘collateral estoppel . . . is not appropriate.’” *Id.* at 20 (citing *Ebates Performance Mktg., Inc. v. Int’l Bus. Machines Corp.*, IPR2022-00646, Paper 56 at 10 (PTAB Oct. 11, 2023)).

We agree with Patent Owner based on the current record. Although the Lectrosonics IPRs involved the ’902 patent and other patents from the same family as the ’902 patent, which recite many similar claim limitations, the Lectrosonics IPRs were all decided using the BRI standard, not the *Phillips* standard. Thus, no claim interpretation has been made using the standard that will be applied in this case, and the asserted prior art has not been applied to claims interpreted according to the standard in this case. Accordingly, on this record, we are not persuaded that collateral estoppel applies to any of the disputed issues in this proceeding. *See DDR Holdings, LLC v. Priceline.com LLC*, 122 F.4th 911, 918–919 (Fed. Cir. 2024) (“‘Because the Board applies the broadest reasonable construction of the claims while the district courts apply a different standard of claim construction as explored in *Phillips*,’ a party is not collaterally estopped in district court proceedings by the Board’s constructions during IPR.”); *SkyHawke*, 828 F.3d at 1376. Regardless, we determine that Petitioner has shown a reasonable likelihood of prevailing on its asserted ground as to claim 1 based on the preliminary claim interpretations applied herein. *See infra* Section II.E.5.h.

b) Undisputed Limitations

Petitioner argues that Strub, Woo, Nagai, and Gleissner collectively teach all of the limitations of claim 1. Pet. 26–51. The preamble of claim 1 recites “[a] system for recording locally generated audio.”⁹ Petitioner contends Strub teaches a plurality of users that wear recording units 105–108, 200, and 300. Pet. 26–27 (citing Ex. 1003, Fig. 1). Petitioner contends each recording unit stores locally generated audio and transmits the audio to a remote device, which also records it. *Id.* at 27. Petitioner contends Woo also teaches the preamble, teaching a system that includes recorder 14/16, GPS receiver 18/22, and time code generator 43 which records locally generated audio and transmits that audio to editing station 34. *Id.* at 29–30.

Claim 1 next recites six components of the claimed system. Petitioner argues Strub and Woo teach [A] “at least one master timecode generator for generating a plurality of master timecodes” (i.e., Strub’s GPS satellite that transmits GPS time information or SMPTE timecode source that transmits SMPTE time code input; and Woo’s GPS satellites that generate and transmit time clock information). Pet. 31.

Petitioner argues Strub teaches [B] “at least one audio device wearable by a creator of said locally generated audio” (i.e., recording units

⁹ On the record before us, we determine that the preamble is limiting at least because the body of the claim refers to the preamble for antecedent basis for the term “locally generated audio.” *See Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.”). Even if it was not, though, limitation 1[F] recites “locally generated audio.”

105–108, 200, and 300 worn by people conversing at an event as depicted in Figure 1). Pet. 32. Petitioner argues Strub and Woo teach [C] “at least one local audio device receiver for receiving at least one of the group consisting of digital commands, said master timecodes, and non-local audio data” (i.e., Strub’s receiver that receives non-local data and GPS receiver that receives GPS time information from a GPS satellite; and Woo’s GPS receiver that receives GPS signals from one or more of GPS satellites 26–28 and master time codes from satellite receivers 18, 22). Pet. 35.

Petitioner argues Strub, Nagai, and Gleissner teach [D] “at least one audio input port for receiving locally generated audio from an audio input device” (i.e., Strub’s audio data acquisition device, or microphone, that is connected to system controller 301; Nagai’s “mike” jack for coupling an external microphone to an audio recorder; and Gleissner’s XLR plug connector for coupling a microphone to an audio recorder). Pet. 36–40.

Petitioner argues Strub teaches [E] “at least one memory” (i.e., Strub’s data storage device 305). Pet. 40–41. Petitioner argues Strub and Woo teach [F] “at least one control unit in communication with said local audio device receiver, said audio input device, and said memory for creating local audio data from said locally generated audio and storing said local audio data in said memory” (i.e., Strub’s system controller 301 and/or data processing device 304 which communicates with the GPS-based position sensing device 311 (the local audio device receiver), the audio input port (the connection to data acquisition device 303) and the memory (data storage device 305); and Woo’s recording devices that store sound and picture recordings). Pet. 42–44.

Claim 1 next recites three wherein clauses relating to the “local audio data.” Petitioner argues Strub and Woo teach [G] “wherein said local audio data includes stamped local audio data and unstamped local audio data” (i.e., Strub’s time stamps and time codes added to the recording data; and Woo’s time codes generated by commercially-available time code generator 43, which are used to stamp at least a portion of the local audio data). Pet. 44–46.

Petitioner argues Strub and Woo teach [H] “wherein said stamped local audio data includes at least one first timestamp to reference at least a portion of said local audio data to at least one of said master timecodes” (i.e., Strub’s GPS time stamps that are applied to audio data; and Woo’s time codes that are received from satellite receiver). Pet. 46–47. Finally, Petitioner argues Strub teaches [I] “wherein said unstamped local audio data does not include a reference to said master timecodes” (i.e., Strub’s audio samples other than the first or final sample for an obtained recording, which have not been stamped). Pet. 47.

Patent Owner disputes whether the cited references teach a system for recording “locally generated audio,” a “master timecode generator” as Patent Owner construes the term, and a local audio device “wearable” by a creator of locally generated audio, but does not otherwise dispute the above limitations of claim 1. Prelim. Resp. 35–50. Petitioner’s analysis for the undisputed limitations, supported by the testimony of Dr. Kyriakakis, is persuasive based on the current record. *See* Pet. 26–47; Ex. 1002

¶¶ 105–114, 117–123, 128–141, 146–153, 157–167.

c) “Locally Generated Audio”: Limitation 1[Pre] and 1[F]

The preamble of claim 1 recites a system for recording “locally generated audio.” In limitation [F], claim 1 further recites “at least one control unit . . . for creating local audio data from said locally generated audio and storing said local audio data in said memory.” Petitioner identifies as “locally generated audio” the audio that is captured by Strub’s recording units 105–108, 200, and 300. Pet. 27–28. Petitioner more specifically identifies Strub’s system controller 301 as acquiring locally generated audio via audio data acquisition device 303 and storing the audio as local audio data in data storage device 305. *Id.* at 42–43.

Petitioner also identifies as “locally generated audio” the audio that is captured by Woo’s local audio device comprising recorder 14/16, GPS receiver 18/22, and time code generator 43. *Id.* at 29–30. Petitioner argues Woo’s system stores locally generated audio in memory as local audio data. *Id.* at 44.

Patent Owner argues that Strub and Woo teach “the opposite of ‘locally generated audio’” because their audio is “locally ‘received’ or ‘heard’ by a recorder,” not “generated, or created, by the recorder.” Prelim. Resp. 36 (citing Ex. 1003, col. 22, ll. 16–33; Ex. 1004, col. 5, ll. 3–5). Patent Owner asserts that this “heard” audio is not suitable for multi-track recording because it “does not include individual, isolated tracks of audio” for each performer that can be independently edited. *Id.* (quoting Ex. 2015 ¶ 157; citing Ex. 2021 ¶ 15).

Petitioner argues that even under Patent Owner’s construction, Strub teaches “locally generated audio.” Prelim. Reply 5. In particular, Petitioner argues that Strub teaches recording units that “may be ‘worn’ by a person

‘participating in’ as opposed to merely ‘observing’ an event.” *Id.* (citing Ex. 1003, code (57), col. 1, ll. 24–35, col. 8, ll. 6–26, col. 11, ll. 3–17, Fig. 1). According to Petitioner, Strub provides examples, such as participants singing “Happy Birthday,” playing ping pong, and participating in a group hike or family trip to an amusement park. *Id.* (citing Ex. 1003, col. 2, ll. 55–65, col. 47, ll. 33–39, col. 52, ll. 19–24, col. 67, l. 59–col. 68, l. 2). Petitioner argues that each audio device records “‘an independent track of audio’ distinct from the recordings of other devices since they are not co-located and would receive sound differently.” *Id.* Petitioner contends that Patent Owner provides no evidence that multiple voices, including those of people not wearing the audio device, “cannot be recorded as an independent audio track.” *Id.*

We disagree with Patent Owner’s arguments based on the current record. Although Strub describes embodiments where the focus of the recording performed by the audio device is on sounds primarily in front of the recorder, as cited by Patent Owner, *see* Prelim. Resp. 36 (citing Ex. 1003, col. 22, ll. 16–33), Petitioner also has identified embodiments where the audio device captures audio created by the wearer of the device, *see* Prelim. Reply 5. Indeed, Strub refers to the recorder’s participation in the event being recorded repeatedly throughout its disclosure, providing multiple examples as Petitioner points out. *See id.*

At this stage, we find that Petitioner has made a sufficient showing that Strub teaches “locally generated audio” as recited in claim 1.

d) “Master Timecode Generator” and “Master Timecode”:
Limitation 1[A]

Limitation 1[A] recites “at least one master timecode generator for generating a plurality of master timecodes.” As explained above, we interpret “master timecode generator” as “a producer of a master time reference signal that controls at least one other timecode generator,” and “mastertimecode” as “a time reference signal used to synchronize at least one device.” *See supra* Section II.D.3.

Petitioner argues that “Strub discloses receiving a master timecode—*e.g.*, GPS time information—from a master timecode generator—*e.g.*, a GPS satellite or SMPTE timecode source.” Pet. 31 (citing Ex. 1003, col. 62, l. 26–col. 63, l. 60, col. 75, ll. 25–57). Petitioner further contends that “Woo also discloses receiving a master SMPTE timecode from a master timecode generator—*e.g.*, GPS satellites 26–28.” *Id.* (citing, *e.g.*, Ex. 1004, col. 5, ll. 5–10, 21–29, col. 7, ll. 26–47, col. 8, l. 60–col. 9, l. 4, Figs. 2–4; Ex. 1002 ¶ 153). And Petitioner provides reasons why a person of ordinary skill in the art would have been motivated to modify Strub’s system to incorporate Woo’s synchronization methods. *Id.* at 21–22. At this stage, we find that Petitioner has made a sufficient showing that Woo teaches limitation 1[A].¹⁰

Patent Owner, relying on the testimony of Mr. DeFilippis, argues that “Woo’s ‘master clock’ is not a ‘master timecode generator for generating a plurality of master timecodes.’” Prelim. Resp. 49 (quoting Ex. 2015 ¶ 92,

¹⁰ As explained above, Petitioner alternatively argues that Strub alone teaches the limitation, and the parties make various arguments regarding Strub’s disclosure. *See* Pet. 31; Prelim. Resp. 45–49; Prelim. Reply 1–3; Prelim. Sur-Reply 1–3. We need not evaluate Petitioner’s alternative arguments regarding Strub at this time, given Petitioner’s showing regarding the combination with Woo.

93). Patent Owner contends that “there is no mention of any such secondary timecode generator in Woo, let alone that they are controlled by Woo’s master clock.” *Id.* Mr. DeFilippis explains that “[t]he mere disclosure of a master clock and master clock input ports on commercially-available equipment does not nearly meet the requirements of the claimed ‘master timecode generator’ that is a producer of a master time reference signal that controls at least one other timecode generator.” *Id.* (quoting Ex. 2015 ¶ 94). Mr. DeFilippis further opines that Woo needs to combine the time output of its GPS receiver with “a highly accurate pulse because the output of the GPS receiver is insufficient to achieve synchronization,” whereas the ’902 patent “teaches timecodes having sufficient data to synchronize audio segments.” *Id.* at 49–50 (quoting Ex. 2015 ¶ 95; citing Ex. 1004, col. 8, ll. 13–18).

We disagree based on the current record. Woo teaches providing master timecodes in SMPTE format for the purpose of synchronizing recorded data from independent sound, film, and video recorders. *See* Ex. 1004, codes (54), (57), col. 3, ll. 20–24, col. 4, ll. 13–15; Pet. 52–53. As shown in Figure 5, “master” clock 120, comprising GPS navigation satellite receiver 122, digital signal processor 124, and time-period-to-frequency converter 126, receives a GPS time signal and provides a “precision clock output . . . for synchronizing film and video equipment.” Ex. 1004, col. 8, l. 60–col. 9, l. 1. Woo further describes the “slave” or “jam-sync” process, which “allows a time code generator to *follow* the time code off another source.” *Id.* at col. 3, ll. 38–41 (emphasis added), col. 7, ll. 29–38 (“A commercially-available time code generator 43 . . . generates time code[s] . . . and will jam to both the output connection 38 and normal SMPTE/EBU time code.”). Thus, based on the current record, Petitioner has

explained sufficiently how Woo’s GPS satellites 26–28 (the “master timecode generator”) transmit time clock information, or time codes, to receivers 18 and 22 (“a plurality of master timecodes”). *See* Pet. 31; Prelim. Reply 3.

Patent Owner also makes various arguments in its Preliminary Sur-Reply pertaining to the issue of “control” of the local timecode generator. *See* Prelim. Sur-Reply 1–2. Patent Owner contends that the GPS signals in Strub and Woo “provide time information to their internal clocks” but “do not exercise control over *how the internal clocks operate (e.g., the speed of such clocks)*.” *Id.* at 1 (emphasis added). Likewise, Patent Owner argues that “the reliability of a GPS time signal . . . is entirely contingent upon continuous signal availability because Strub and Woo do not teach the ability of the GPS signals to control *the operation of the internal clocks*.” *Id.* at 2 (emphasis added). As explained above, we preliminarily interpret “master timecode generator” to mean “a producer of a master time reference signal that controls at least one other timecode generator,” but do not limit the term to any particular type of control. *See supra* Section II.D.3. On this record, we do not see any requirement in the claim that the master time reference signal control the *operation* of an internal clock of the local timecode generator (e.g., by modifying the speed of such a clock). Limitation 1[A] merely recites that at least one master timecode generator generates a plurality of master timecodes. Also, to the extent Patent Owner asserts that the master timecode generator must itself “control[] how the local timecode generator operates,” we disagree; our preliminary interpretation specifies that it is the master time reference *signal* that

“controls” the other timecode generator. *See* Prelim. Sur-Reply 1–2; Ex. 2015 ¶¶ 50, 93.

Next, relying on the testimony of Mr. Norflus, Patent Owner argues that “GPS or satellite reception of time code[s] is unreliable and not a viable solution for the transmission or reception of timecode[s],” as “[t]here are many instances where receiving a GPS signal would just not be possible” (e.g., “recording studios” or “underground locations”). Prelim. Resp. 50 (quoting Ex. 2021 ¶ 27); Prelim. Sur-Reply 2–3. The ’902 patent, by contrast, “provides for accurate transmission of master timecodes in all locations including those not accessible by satellite signals” according to Patent Owner. Prelim. Resp. 50. Claim 1, however, does not include any requirement for synchronization from “all” locations or instances—the relevant question is whether the device based on the combined teachings of Strub and Woo would have a “master timecode generator for generating a plurality of master timecodes.” Based on Woo’s disclosure discussed above regarding GPS satellites 26–28 generating and transmitting time clock information, or time codes, to receivers 18 and 22, Petitioner has made a sufficient showing on this record. *See, e.g.*, Ex. 1004, col. 3, ll. 38–41, col. 7, ll. 27–53, col. 8, l. 60–col. 9, l. 4, Figs. 1, 3, 5.

At this stage, we find that Petitioner has made a sufficient showing that Woo teaches limitation 1[A].

e) “Wearable” Local Audio Device: Limitation 1[B]

Petitioner argues that Strub’s recording units, shown in Figures 1 and 3, for example, are “wearable” by a user, as recited in the limitation [B] of claim 1. Pet. 32–34. As explained above, we interpret “wearable” to mean “suitable and in a condition to be worn.” *See supra* Section II.D.1.

Patent Owner argues that Petitioner has not established that Strub teaches a “local audio device wearable by a creator of said locally generated audio.” Prelim. Resp. 38–45. Patent Owner argues that Strub teaches different variations of recording units, some of which Patent Owner calls the “Basic Strub Recording Unit” and some of which Patent Owner calls the “Advanced Strub Recording Unit.” *Id.* at 39. Patent Owner argues that Strub describes recording units 105–108 and recording unit 200 as Basic Strub Recording Units without any mention of a receiver, a transmitter, or an ability to transmit or receive data. *Id.* (citing Ex. 1003, col. 8, ll. 13–29, Fig. 2). Patent Owner argues that Strub describes recording unit 300 as an Advanced Strub Recording Unit that includes a transmitter and receiver, for which data acquisition is performed by a video data acquisition device and an audio data acquisition device, instead of the single data acquisition device of the Basic Strub Recording Units. *Id.* (citing Ex. 1003, col. 11, ll. 48–50, col. 12, ll. 13–16).

According to Patent Owner, Petitioner cites recording unit 300 as the “audio device” recited in claim 1, but cites Figure 1, which only refers to recording units 105–108, to show wearability of the recording units. Prelim. Resp. 40 (citing Pet. 32–33). Patent Owner argues that recording units 105–108 cannot be equated to the local audio device of claim 1 because these Basic Strub Recording Units do not contain a transmitter and receiver and Petitioner has made no showing of Strub teaching an Advanced Strub Recording Unit that contains a transmitter and receiver and is also wearable. *Id.* at 40–41. In support of this argument, Patent Owner proffers that Strub (1) at col. 4, ll. 21–31 teaches a Basic Strub Recording Unit with no receiver or transmitter; (2) at col. 14, l. 59–col. 15, l. 11 and col. 16, l. 66–col. 17,

l. 24 describes wearability of a visual acquisition device, not the recording unit, which shows that the visual acquisition device is not wearable because it must be attached to a wearable apparatus; (3) at col. 38, l. 65–col. 39, l. 11 describes wearability of an audio communication device, not a recording unit; (4) at col. 66, ll. 33–51 describes a data acquisition device, which is used in the Basic Strub Recording Unit, and this device may not even be wearable; and (5) at col. 67, l. 54–col. 68, l. 10 and col. 72, ll. 9–19 refers to the wearability of a Basic Strub Recording Unit with no receiver or transmitter. Prelim. Resp. 40–42.

We disagree with Patent Owner’s arguments based on the current record. Patent Owner cites various disclosures in Strub, arguing that they break down into two categories—Basic and Advanced Strub Recording Units. But this distinction is not supported by Strub’s teachings. As cited by Petitioner (*see* Pet. 32), Strub teaches that its recording units may include many potential combinations of components and that the goal of packaging these components together is to achieve a small, light, unobtrusive recording unit that is comfortable to wear, *see* Ex. 1003, col. 66, ll. 33–51. Petitioner identifies teachings in Strub regarding potential components of recording units, including communications devices such as the transmitter and receiver. *See* Pet. 35 (citing Ex. 1003, col. 35, ll. 51–65). Petitioner identifies teachings in Strub indicating that it would be desirable to include many of these components in a single apparatus that is easily worn. *See id.* at 32 (citing Ex. 1003, col. 4, ll. 21–31 (describing “a small, lightweight, wearable recording unit”), col. 66, ll. 33–51 (disclosing goals of making the recording unit “small,” “comfortable to wear,” and “as lightweight as possible”)). Strub teaches that certain components may be excluded from

this apparatus to keep the recording unit as compact as possible, but the transmitter and receiver are not included in this exclusion list. Ex. 1003, col. 66, ll. 33–51. Accordingly, Patent Owner’s argument that Strub distinguishes between two categories of recording units such that Petitioner errs by relying on “Basic Strub Recording Units” for wearability is unsupported on the current record.

Moreover, the visual and audio acquisition devices described by Patent Owner as separate from the recording unit may be internal components of the recording unit or may be connected to a recording unit that is worn by a recorder. Claim 1 recites “at least one local audio device wearable by a creator of said locally generated audio including . . . at least one audio input port for receiving locally generated audio from an audio input device.” In other words, the audio input device may be separate from the claimed local audio device that is wearable by a creator of the locally generated audio.

Finally, to the extent Patent Owner asserts that Strub’s recording units are not suitable to be worn by a “performer” because “they are too large, visible, heavy, and imposing to be worn during the filming of performances,” we are not persuaded, because we have interpreted “wearable” more broadly, to require only a “creator of said locally generated audio.” See Prelim. Resp. 42–44; *supra* Section II.D.1.

At this stage, we find that Petitioner has made a sufficient showing that Strub teaches a “wearable” audio device as recited in claim 1.

f) Analogous Art

Patent Owner argues that Strub and Woo are non-analogous art because they are neither in the same field of endeavor as the claimed invention nor reasonably pertinent to the problems faced by the inventors of the '902 patent. Prelim. Resp. 58–60. Patent Owner contends that Strub and Woo are not in “the field of multi-track recording.” *Id.* at 59. Patent Owner argues Strub is in the field of “low attention, social recording,” and “Woo discloses a ‘GPS receiver [that] comprises a data output port for communicating time code information formatted according to standards.’” *Id.* Patent Owner argues that the claimed invention “does not mention any ‘GPS satellite or receiver; it instead relates to using a master timecode generator to control other timecode generators in other recorders’” and “GPS signals are known to be incompatible with performance recording as many recording locations . . . are not capable of receiving satellite signals.” *Id.* at 59–60 (quoting Ex. 2015 ¶ 116; citing Ex. 2021 ¶ 27).

“A reference qualifies as prior art for an obviousness determination under § 103 only when it is analogous to the claimed invention.” *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011). “Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

Based on the current record, we are persuaded that Strub and Woo satisfy both tests. The '902 patent describes a field of endeavor of synchronizing different recordings of a live performance. *See, e.g.,*

Ex. 1001, col. 1, ll. 26–28 (“Embodiments of the present invention generally relate to systems and methods for recording and processing audio received from one or more wireless devices.”). Strub and Woo are from the same field. *See, e.g.*, Ex. 1003, col. 1, ll. 26–31 (“The invention . . . relates to recording an event in which multiple persons participate . . . [and] recording of the event by multiple participants (i.e., from multiple points of view), often simultaneously.”), col. 52, ll. 18–24 (describing “a recording of a birthday party” involving “the singing of ‘Happy Birthday’”); Ex. 1004, codes (54) (“Time-Keeping System and Method for Synchronizing Independent Recordings of a Live Performance in Post-Recording Editing”), (57) (describing “time code information . . . input to independent sound, film and video recorders at a performance event to create tracks on each recording for re-synchronizing the pictures and sounds in post-performance editing”). We disagree that the field of endeavor is limited to “professional” sound recording as Patent Owner contends. *See* Prelim. Resp. 59–60; *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1001 (Fed. Cir. 2016) (“The field of endeavor of a patent is not limited to the specific point of novelty, the narrowest possible conception of the field, or the particular focus within a given field.”).

The ’902 patent also addresses problems with synchronization of audio from multiple recording devices using timecodes or timestamps (e.g., in the case of transmission errors for a particular audio track). *See, e.g.*, Ex. 1001, col. 1, l. 26–col. 2, l. 6, col. 5, ll. 10–17 (“[s]ynchronization is essential to ensure that each performer’s audio is synchronized with all other performers’ audio” and “must maintain a high accuracy for each performer’s timestamps with respect to all other performers’ timestamps”). Strub and

Woo are reasonably pertinent to the problem of synchronization. *See, e.g.*, Ex. 1003, col. 63, ll. 41–60 (“the time-stamps of all recording units are adequately synchronized”), col. 75, ll. 47–51; Ex. 1004, code (57), col. 4, l. 62–col. 5, l. 53 (describing SMPTE timecodes and jam synchronization). And the fact that both references utilize GPS signals as part of their respective *methods* of synchronization does not undermine the pertinence of the references to the general problem of synchronization of audio from different recording devices. *See* Prelim. Resp. 59–60; *Innovation Toys, LLC v. MGA Entm’t, Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011) (“A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.”).

g) Reasons to Combine

Petitioner argues that it would have been obvious to modify Strub’s recording unit to use “conventional SMPTE-formatted timecodes from Woo’s master clock,” which “would involve nothing more than combining familiar elements according to known methods to improve Strub’s system and yield predictable results.” Pet. 22 (citing Ex. 1002 ¶ 107). Petitioner points out various similarities between the Strub and Woo systems and asserts that Woo “provides express motivations to use its synchronization methods in a wireless, multi-recorder system such as Strub’s.” *Id.* In particular, Petitioner contends that “Woo’s master clock (1) provides accurate synchronization across recorders recording a performance, (2) can generate coordinated timecodes at independent sites proximate to recorders, (3) is simple to connect to the recorders, and (4) provides timecode output in

a format that is compatible with a standard (SMPTE) used by commercially available equipment.” *Id.* (citing Ex. 1004, col. 4, ll. 3–44).

Petitioner further argues that the ’902 patent “sought to solve the problem of matching the timing between multiple recordings produced by one or more wireless devices” by “generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp the locally recorded audio data.” Pet. 24 (citing, e.g., Ex. 1001, col. 4, ll. 14–36, col. 4, l. 62–col. 5, l. 19). Petitioner asserts that “Strub and Woo recognized and solved that same problem in the same way,” pointing to the references’ disclosures regarding synchronization using GPS time signals. *Id.* (citing, e.g., Ex. 1003, col. 62, l. 26–col. 63, l. 60; Ex. 1004, code (57), col. 4, ll. 13–19, col. 5, ll. 5–10, col. 7, ll. 26–50).

Patent Owner’s arguments in response are largely premised on an alleged failure of Strub and Woo to teach certain claim limitations. *See* Prelim. Resp. 56–58. Patent Owner disputes that a person of ordinary skill in the art would have combined the teachings of Strub and Woo to solve the “dropout problem” because the references do not teach “multi-track recording,” as they “capture single tracks of mixed audio that do not include individual tracks of audio per performer/audio source.” *Id.* at 56. Based on the current record, we disagree with Patent Owner’s assertion that the references do not teach “locally generated audio,” for the reasons explained above. *See supra* Section II.E.5.c.

Similarly, Patent Owner argues that an ordinarily skilled artisan would not have combined Strub and Woo because the approaches followed by the two references “substantially differ from each other and the claimed

invention.” Prelim. Resp. 57 (quoting Ex. 2015 ¶ 111). According to Patent Owner, Strub discloses “a GPS time signal that produces time stamps but does not control another timecode generator or produce a time reference signal used to synchronize at least one device,” and Woo discloses a master clock with a GPS navigation satellite receiver and digital signal processor. *Id.* Again, based on the current record, we disagree with Patent Owner’s assertion that the references do not teach a “master timecode generator” producing a master time reference signal that controls a local timecode generator, for the reasons explained above. *See supra* Section II.E.5.d. And, although the specific synchronization functionality is different in the references, Strub and Woo are similar in that they both teach receiving a GPS time signal and using it for synchronization. *See* Pet. 31.

Finally, Patent Owner argues that “Strub already discloses a solution to post-production editing (i.e., participants share their locally recorded audio after a recorded event),” so “applying the Woo solution in post-production in Strub would have been unnecessary.” Prelim. Resp. 58 (quoting Ex. 2015 ¶ 115; citing Ex. 1003, col. 80, ll. 52–58). We disagree on this record. Petitioner provides multiple reasons for why a person of ordinary skill in the art would have found it desirable to modify Strub’s system to use the synchronization method of Woo, including that Woo’s system produces “accurate synchronization across recorders,” generates “coordinated timecodes at independent sites,” is “simple to connect,” and provides timecodes in a format compatible with commercially-available equipment, with supporting testimony from Dr. Kyriakakis. *See* Pet. 22; Ex. 1002 ¶ 107; *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004) (“[T]he question is whether there is something in the prior art as a whole to suggest

the *desirability*, and thus the obviousness, of making the combination,’ not whether there is something in the prior art as a whole to suggest that the combination is the *most desirable* combination available.”). Petitioner also explains how Strub and Woo address the same problem of synchronization of audio from multiple recording devices, again with supporting testimony. *See* Pet. 24–25; Ex. 1002 ¶ 111; *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (“That [two references] address the same problem and that [one reference’s teaching] was a known way to address that problem is precisely the reason that there [is] a motivation to combine under *KSR*”). Petitioner has made a sufficient showing as to the combination of Strub and Woo based on the current record.

As to the further combination with Nagai and Gleissner, Petitioner argues that a person of ordinary skill in the art would have been motivated to use Nagai and Strub’s well-known standard connectors in Strub’s local audio device “because of their popularity, especially since Strub teaches the use of specific brands of commercially available microphones configured to be plugged into a standard XLR jack as described in Gleissner.” Pet. 23 (citing Ex. 1003, col. 25, ll. 35–49).

Patent Owner responds that modifying Strub’s system based on Nagai or Gleissner would change the principle of operation of Strub or render it unsuitable for its intended purpose. Prelim. Resp. 60–61. In particular, Patent Owner argues that Strub’s intended purpose is “low attention, social recording that allows multiple recorders to record the same event from multiple viewpoints.” *Id.* (citing Ex. 1003, code (57)). Patent Owner argues that Petitioner’s proposed modification of Strub to incorporate Nagai’s audio input port (a mic jack) or Gleissner’s conventional audio input port (an XLR

plug connector) “would cause each Strub recorder to record only the recorder’s audio” via the audio input port, “which would result in only one audio recording for any given event despite the number of recorders or possible viewpoints.” *Id.* at 61.

We disagree with Patent Owner’s arguments based on the current record. Strub discloses that its audio device may include an “audio data acquisition device,” such as a “microphone.” *See* Pet. 36–37 (citing Ex. 1003, col. 68, l. 63–col. 69, l. 67). Petitioner alleges that an ordinarily skilled artisan would have understood Strub to teach a “microphone [that] is not soldered or hard-wired, but [is] connected to the local audio device through an audio input port such as a microphone jack and/or plug.” *Id.* at 37. Petitioner proposes incorporating Nagai’s mic jack or Gleissner’s XLR plug connector as an “audio input port,” to the extent Strub does not teach such a port. *Id.* at 38–40. Thus, the proposed modification does not necessarily change the operation of the audio data acquisition device itself, only its physical connection to the wearable audio device. Patent Owner’s argument that the proposed modification would change the manner of recording thus is not commensurate with the scope of Petitioner’s proposed combination.

Petitioner has made a sufficient showing as to the combination of Strub and Woo with Nagai and Gleissner based on the current record.

h) Conclusion

Petitioner’s contentions regarding the combination of Strub, Woo, Nagai, and Gleissner are supported by the testimony of Dr. Kyriakakis and are persuasive based on the current record. *See* Pet. 26–47; Ex. 1002

¶¶ 105–114, 117–123, 128–141, 146–153, 157–167. Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 1 is unpatentable over Strub, Woo, Nagai, and Gleissner. Accordingly, we institute review “on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” *See* 37 C.F.R. § 42.108(a).

6. Claims 2, 3, 6, 13, and 16

Claims 2, 3, and 6 depend from claim 1. Patent Owner does not argue dependent claims 2, 3, and 6 separately from claim 1. Prelim. Resp. 33–62. Claims 13 and 16 depend from claim 12. Patent Owner argues that Petitioner has not demonstrated that Strub or Woo teach “wherein at least a portion of said local audio data is retrieved during or subsequent to said audio event and is combined with said remote audio data,” as recited in independent claim 12. Prelim. Resp. 51–53. On this record, we disagree with Patent Owner’s arguments regarding independent claim 1 and are persuaded that Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 1 is unpatentable over Strub, Woo, Nagai, and Gleissner. *See supra* Section II.E.5. Accordingly, we need not determine at this time whether Petitioner also has shown a reasonable likelihood of prevailing as to any of the other challenged claims. *See* 37 C.F.R. § 42.108(a).

F. Grounds 2 and 3

Petitioner relies on the combination of Strub, Woo, Nagai, Gleissner, and Jones to present a challenge of obviousness for claims 4, 5, 9, and 10. Pet. 60–69 (Ground 2). Petitioner relies on the combination of Strub and Woo to present a challenge of obviousness for claims 17–20. *Id.* at 69–73

(Ground 3). Patent Owner does not offer any specific arguments with respect to Ground 2, but with respect to Ground 3 Patent Owner argues that Petitioner has not demonstrated that Strub and Woo teach all of the elements of claim 17. Prelim. Resp. 53–56. Because we have found that Petitioner has established a reasonable likelihood of prevailing on its assertion that claim 1 is unpatentable over Strub, Woo, Nagai, and Gleissner, we need not determine at this time whether Petitioner also has shown a reasonable likelihood of prevailing as to any of the other grounds. *See* 37 C.F.R. § 42.108(a).

III. CONCLUSION

Based on the arguments presented in the Petition, we conclude that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one claim of the '902 patent challenged in the Petition. Accordingly, we institute a trial on all challenged claims (i.e., claims 1–6, 9, 10, 13, and 16–20) and all grounds asserted with respect to those claims in the Petition. The Board has not made a final determination under 35 U.S.C. § 318(a) with respect to the patentability of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–6, 9, 10, 13, and 16–20 of the '902 patent is instituted with respect to all grounds set forth with respect to those claims in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and

37 C.F.R. § 42.4(b), *inter partes* review of the '902 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

IPR2025-00231
Patent 7,929,902 B1

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Exhibit C

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RØDE MICROPHONES, LLC, and
FREEDMAN ELECTRONICS PTY LTD.,
Petitioner,

v.

ZAXCOM, INC.,
Patent Owner.

IPR2025-00232
Patent 10,276,207 B1

Before JUSTIN T. ARBES, MIRIAM L. QUINN, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

PER CURIAM.

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

I. INTRODUCTION

A. Background and Summary

RØDE Microphones, LLC, and Freedman Electronics Pty Ltd. (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 17–19, 21–23, 33, 34, 59, 60, and 66 of U.S. Patent No. 10,276,207 B1 (Ex. 1001, “the ’207 patent”) pursuant to 35 U.S.C.

§ 311(a). Patent Owner Zaxcom, Inc., filed a Preliminary Response (Paper 8, “Prelim. Resp.”) pursuant to 35 U.S.C. § 313. Also, pursuant to our authorization (Paper 9), Petitioner filed a Preliminary Reply (Paper 10, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-Reply (Paper 11, “Prelim. Sur-Reply”).

Pursuant to 35 U.S.C. § 314(a), the Director may not authorize an *inter partes* review unless the information in the petition and preliminary response “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” *See* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”). For the reasons that follow, we institute an *inter partes* review as to claims 17–19, 21–23, 33, 34, 59, 60, and 66 of the ’207 patent on all grounds of unpatentability asserted in the Petition.

B. Related Matters

The parties indicate that the ’207 patent is the subject of *Zaxcom, Inc. v. RØDE Microphones, LLC*, No. 23-cv-01245 (D. Del.) (“the district court case”). *See* Paper 12, 1; Paper 6, 2. Petitioner filed petitions challenging other patents related to the ’207 patent and asserted in the district court case: U.S. Patent No. 7,711,443 B1 (IPR2025-00230), U.S. Patent No. 7,929,902 B1 (Ex. 1030, “the ’902 patent”) (IPR2025-00231), and U.S. Patent No. 12,051,444 B2 (IPR2025-00557).

Three patents related to the ’207 patent previously were challenged by a different petitioner, Lectrosonics, Inc. In IPR2018-00972, the Board found challenged claims 1–14 of U.S. Patent No. 9,336,307 B2 (Ex. 1015, “the ’307 patent”) unpatentable and granted Patent Owner’s motion to amend

seeking to add proposed substitute claims 15–28. Ex. 1014.

In IPR2018-01129, the Board found challenged claims 7, 8, 11, 12, 14, and 15 of the '902 patent unpatentable and granted Patent Owner's motion to amend seeking to add proposed substitute claims 21–26. Ex. 1017.

In IPR2018-01130, the Board found challenged claims 1–4, 9, 10, 12, 15, 31, 36, 37, and 41–45 of U.S. Patent No. 8,385,814 B2 (Ex. 1028, "the '814 patent") unpatentable and granted Patent Owner's motion to amend seeking to add proposed substitute claims 50–65. Ex. 1018. The Board's final written decisions were entered after the '207 patent issued on April 30, 2019. The Board's final written decisions were affirmed, and the Office issued *inter partes* review certificates cancelling the challenged claims and adding the substitute claims. See Pet. 12; Exs. 1015, 1028, 1030; *Zaxcom, Inc. v. Lectrosonics, Inc.*, No. 2020-1350, 2022 WL 499843 (Fed. Cir. Feb. 18, 2022); *Zaxcom, Inc. v. Lectrosonics, Inc.*, No. 2020-1921, 2022 WL 499848 (Fed. Cir. Feb. 18, 2022). We refer to the earlier proceedings as "the Lectrosonics IPRs."

C. The '207 Patent

The '207 patent discloses "systems and methods for recording and processing audio having one or more tracks received from one or more wireless devices operating in either an asynchronous or synchronous mode." Ex. 1001, col. 1, ll. 47–51.

Figure 1 of the '207 patent is reproduced below.

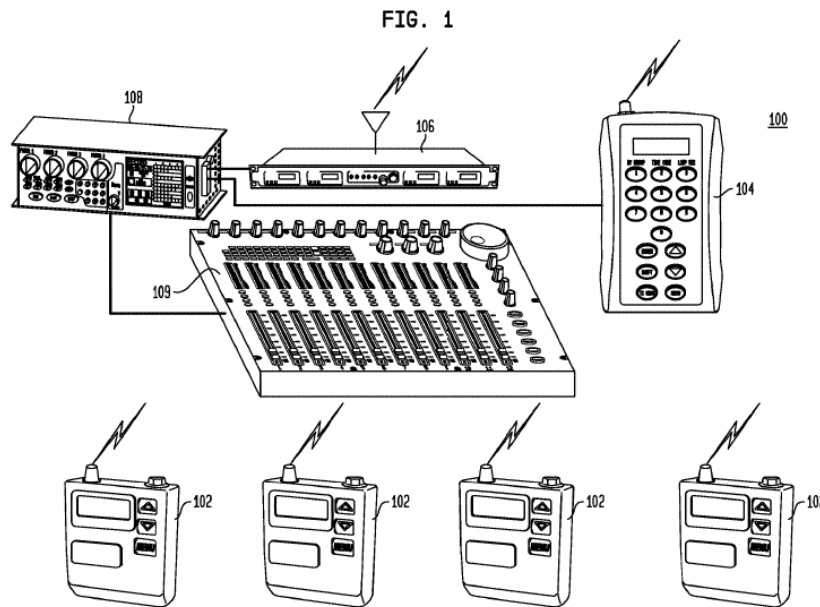


Figure 1 depicts recording system 100, which “wirelessly records audio events, such as performances, movie takes, etc. having one or more performers.” Ex. 1001, col. 4, ll. 1–3. “[R]ecording system 100 includes local audio devices 102, remote control unit (‘RCU’) 104, receiver 106, and recorder 108.” *Id.* at col. 4, ll. 27–30. Local audio devices 102 record live audio and store the audio in memory using timestamps that are synchronized with the timestamps of recorder 108. *Id.* at col. 4, l. 52–col. 5, l. 10. Local audio devices 102 may transmit both live and replayed audio to receiver 106 to be recorded by audio recorder 108. *Id.* at col. 4, ll. 40–42. “RCU 104 includes an RF transmitter capable of transmitting one or more of a time reference signal, digital commands, and audio to one or more other components of recording system 100.” *Id.* at col. 4, ll. 30–33. RCU 104 may remotely control local audio devices 102, receiver 106, and recorder 108 for “initiating audio playback of all local audio devices 102 starting at the same time reference, as well as recording thereof by receiver 106 and recorder 108.” *Id.* at col. 4, ll. 33–39.

D. Illustrative Claim

Challenged claims 17 and 59 of the '207 patent are independent. Claims 18, 19, 21–23, 33, and 34 depend from claim 17, and claims 60 and 66 depend from claim 59. Claim 17 recites the following (with letter designations used in the Petition to refer to the various limitations):

17. [Pre] At least one audio device wearable by a user for storing locally generated audio and transmitting the locally generated audio to a remote device, the remote device including at least one of a receiver, a recorder, a mixer, and combination thereof, the at least one audio device comprising:

[A] a wireless transmitter,

[B] an audio input port configured to couple to an audio input device to receive the locally generated audio;

[C] a memory;

[D] a local timecode generator operable to generate a local timecode;

[E] a control unit coupled to the wireless transmitter, the audio input port, the memory, and the local timecode generator, [F] the control unit operable to: (i) receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode, [G] (ii) transmit the locally generated audio to the remote device via the wireless transmitter; and [H] (iii) store the locally generated audio in the memory as audio data; and [I] (iv) stamp at least a portion of the audio data with the local timecode

E. Evidence

Petitioner relies on the following prior art:

U.S. Patent No. 5,479,351, issued Dec. 26, 1995 (Ex. 1004, “Woo”);

U.S. Patent No. 6,825,875 B1, issued Nov. 30, 2004 (Ex. 1003, “Strub”);

U.S. Patent Application Publication No. 2002/0159179
A1, published Oct. 31, 2002 (Ex. 1005, “Nagai”); and

U.S. Patent Application Publication No. 2004/0028241
A1, published Feb. 12, 2004 (Ex. 1006, “Gleissner”).

F. Prior Art and Asserted Ground

Petitioner asserts that claims 17–19, 21–23, 33, 34, 59, 60, and 66 of the ’207 patent would have been obvious on the basis of prior art printed publications under 35 U.S.C. § 103(a):¹

Claims Challenged	35 U.S.C. §	References/Basis
17–19, 21–23, 33, 34, 59, 60, 66	103(a)	Strub, Woo, Nagai, Gleissner

II. ANALYSIS

A. Discretionary Denial Under 35 U.S.C. § 314(a)

Institution of *inter partes* review is discretionary. *See 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 [*inter partes* review (IPR)] proceeding.”); 35 U.S.C. § 314(a) (“The Director *may not* authorize an *inter partes* review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. The ’207 patent claims priority to an application filed before the effective date of the applicable AIA amendment, and Petitioner refers to the pre-AIA version of 35 U.S.C. § 102; therefore, we refer to the pre-AIA version of 35 U.S.C. § 103. *See* Pet. 14, 16, 19, 22; Ex. 1001, codes (22), (63).

that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” (emphasis added)). Patent Owner argues that we should exercise our discretion to deny the Petition in view of the district court case. Prelim. Resp. 9–20. Petitioner disagrees. Pet. 76–79.

The Board has held that the advanced state of a parallel district court action is a factor that may weigh in favor of denying a petition under § 314(a). *See NHK Spring Co. v. Intrix-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential); Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019), 58 & n.2, *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>. We consider the following factors to assess “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding”:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential). In evaluating these factors, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

1. *Whether the Court Granted a Stay or Evidence Exists That One May Be Granted if a Proceeding is Instituted*

Patent Owner contends that a stay has not been requested in the district court case and, if requested, would “likely” be denied. Prelim. Resp. 11–16. Petitioner contends that it “intends to seek a stay” of the district court case, but without specific evidence of how the district court will rule, this factor is neutral. *See* Pet. 77 (citing *Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative)).

We decline to speculate whether the district court will grant a stay. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (PTAB May 13, 2020) (informative). Thus, we find that factor 1 is neutral.

2. *Proximity of the Court’s Trial Date to the Board’s Projected Statutory Deadline for a Final Written Decision*

Patent Owner argues that although a trial date has not been set in the district court case, it is reasonable to assume that the trial will occur “during 2026.” Prelim. Resp. 16–17. Patent Owner argues that the statutory deadline for the final written decision in the last of the related proceedings (IPR2025-00557) is one year from the date of potential institution thereof, which would be no earlier than September 18, 2026. *Id.*

Petitioner argues that this factor weighs against exercising our discretion because “the final summary judgment and Daubert briefs [in the district court case] are not due until April 10, 2026,” so “it is extremely unlikely that trial will start in or before June 2026.” Pet. 77.

Patent Owner focuses on the statutory deadline for the final written decision in IPR2025-00557 (if instituted), but the statutory deadline for the

final written decision in this proceeding would be in June 2026. There is no trial date set in the district court case. *See* Ex. 1031, 3. Therefore, we find that factor 2 weighs against exercising discretion to deny institution.

3. Investment in the Parallel Proceeding by the Court and the Parties

Patent Owner argues that the parties have expended significant time and resources in the district court case, including substantially completing document production on February 5, 2025. Prelim. Resp. 12–13, 17. Patent Owner argues that claim construction briefing is set to be completed on June 20, 2025, fact discovery closes on August 15, 2025, expert discovery closes on January 23, 2026, and summary judgment and Daubert briefing is scheduled to conclude by April 10, 2026. *Id.* at 12–13. Patent Owner argues that the significant time and resources expended in the district court case were necessitated by Petitioner’s delay in filing its petitions in this proceeding and the related proceedings “until the eve of the statutory deadlines, despite knowledge of [Patent Owner’s] claims for over 44 months prior thereto.” *Id.* at 17. Patent Owner argues that institution in this proceeding would result in expensive duplication of effort. *Id.*

Petitioner argues that this factor weighs against exercising discretion because fact discovery does not end until August 2025, claim construction and expert discovery have not yet begun, a trial date has not been set, and no substantive orders have been issued related to the challenged patent. Pet. 78.

We agree with Petitioner that much work remains in the district court case as it relates to validity because discovery is in its early stages, claim construction briefing is not yet complete, and a *Markman* hearing has not yet occurred. *See* Ex. 1031, 3. Petitioner filed the Petition approximately

fourteen months after Patent Owner filed its original complaint in the district court case, but less than one month after Patent Owner filed its amended complaint. *See* Pet. ix; Prelim. Resp. 2; Exs. 2001, 2002. Although the filing of the Petition does not seem diligent, the timing overall does not outweigh the limited investment in the district court case. Given that limited investment, we determine that this factor weighs slightly against exercising discretion to deny institution.

4. Overlap Between Issues Raised in the Petition and in the Parallel Proceeding

Patent Owner contends that there is “100% overlap between the issues in the Petition and the [district court case], which both rely on identical prior art references and arguments.” Prelim. Resp. 17–18.

Petitioner argues that although all of the challenged claims are currently being asserted in the district court case, the district court recently issued a revised scheduling order which requires Patent Owner to reduce its asserted claims before the *Markman* hearing and after the *Markman* ruling. Pet. 78. Petitioner argues that in light of this reduction, and the overall number of asserted claims, it is likely that many of the challenged claims will not be asserted in the district court case. *Id.* at 78–79. Patent Owner disagrees with this assertion, arguing that it is “pure speculation” because the district court has continued to refuse to force Patent Owner to narrow the number of asserted claims. Prelim. Resp. 18 (citing Ex. 2012).

We decline to speculate whether the claims asserted in the district court case will be narrowed sufficiently that the overlap between the challenged claims and the asserted claims substantially changes. We find that this factor weighs in favor of exercising discretion to deny institution.

5. *Whether the Petitioner and the Defendant in the Parallel Proceeding Are the Same Party*

Patent Owner contends that the parties to this proceeding are the same parties in the district court case. Prelim. Resp. 18. Petitioner agrees, and argues that this factor may depend on which tribunal is likely to address the challenged patent first, which Petitioner contends is the Board. Pet. 79. Because the parties in this proceeding and the district court case are the same, we find that this factor weighs in favor of exercising discretion to deny institution.

6. *Other Circumstances that Impact the Board's Exercise of Discretion, Including the Merits*

Petitioner argues that the “strong showing on the merits” in the Petition weighs against exercising discretion to deny institution, citing the previous USPTO Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022), *available at* https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf. Pet. 76, 79.

Patent Owner argues that the Office’s revocation of the Memorandum,² which “eliminates ‘compelling evidence of patentability’ as a criterion for refusing to deny institution, moots [Petitioner’s] argument.” Prelim. Resp. 19. Patent Owner argues that the merits in this proceeding are

² See USPTO Memorandum, Guidance on USPTO’s Recission of “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation” (March 24, 2025), *available at* https://www.uspto.gov/sites/default/files/documents/guidance_memo_on_interim_procedure_recission_20250324.pdf.

“not a close call” and other factors favoring denial are present, including the district court case that “has 100% overlap with the issues in this Petition” and “also includes 3 additional patents and 66 additional claims.” *Id.*

As explained below, many of the issues raised in this proceeding are similar to those in the Lectrosonics IPRs. *See infra* Section II.B. For example, similar claims were found unpatentable over Strub, Woo, and Nagai or Gleissner in IPR2018-01129 and IPR2018-01130, and claims with some similar limitations were found to be anticipated by Strub in IPR2018-00972. In each of these cases, many of the same issues were decided, albeit under a different claim construction standard.

In view of the totality of the circumstances, this factor weighs against exercising discretionary denial.

7. Conclusion

Having considered the factors above, including the timing of the proceedings, the amount of overlap and additional patents and claims in the district court case, the amount of effort that has been and is yet to be expended in the district court case, and the merits of Petitioner’s challenge, we find that, taken as a whole, the factors do not favor exercising discretion to deny institution. Although the overlapping parties and issues with the district court case weigh in favor of discretionary denial, the lack of any trial date, limited investment in the district court case, and similarity to claims previously held unpatentable by this tribunal weigh against exercising our discretion, and the remaining factor regarding a potential stay is neutral. Accordingly, we decline to exercise discretion to deny institution under § 314(a).

B. Presentation of the Same or Substantially the Same Prior Art or Arguments Under 35 U.S.C. § 325(d)

Pursuant to 35 U.S.C. § 325(d), in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” The Board evaluates two issues in addressing 35 U.S.C. § 325(d):

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
- (2) if either condition of [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”). With respect to the first issue, previously “presented” art includes, among other things, “art provided to the Office by an applicant, such as on an Information Disclosure Statement (IDS), in the prosecution history of the challenged patent.” *Id.* at 7–8. With respect to the second issue, institution generally will be denied if a “petitioner fails to make a showing of material error,” and “[i]f reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability.” *Id.* at 8–9. “[T]his framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Id.* at 9.

The six non-exclusive factors set forth in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15,

2017) (precedential as to § III.C.5, first paragraph) (“*Becton, Dickinson*”), “provide useful insight into how to apply the framework.” *Advanced Bionics*, Paper 6 at 9. Those factors are

(a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art; (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, Paper 8 at 17–18. “If, after review of factors (a), (b), and (d), it is determined that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.” *Advanced Bionics*, Paper 6 at 10. Upon consideration of these factors, we decline to deny institution under § 325(d).

We conclude that the first part of the *Advanced Bionics* framework is satisfied. Petitioner acknowledges that all four asserted references (Strub, Woo, Nagai, and Gleissner) “were before the Examiner during prosecution” of the ’207 patent. Pet. 74. On February 21, 2019, the applicant filed a petition to withdraw the application from issue after payment of the issue fee under 37 C.F.R. § 1.313(c), along with a Request for Continued Examination and an IDS listing the four references as well as the petitions,

preliminary responses, decisions on institution,³ and various exhibits filed in the Lectrosonics IPRs. *See* Prelim. Resp. 21; Ex. 2027, 10–16. The examiner subsequently signed the IDS with the footnote “ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH.” Ex. 2028, 6–12. Further, the petitioner in IPR2018-01130, for example, asserted that the challenged claims were unpatentable over various combinations of Strub, Woo, Nagai, and Gleissner, and the petition, preliminary response, and decision on institution from that proceeding were provided to the examiner. *See* Ex. 1018, 5–6 (listing the asserted grounds); Ex. 1021, 7–8 (same); Ex. 2027, 14–15. Accordingly, the same art previously was presented to the Office.

Turning to the second part of the *Advanced Bionics* framework, Petitioner provides an analysis of the second part in the Petition. *See* Pet. 75–76; *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 5 (Stewart May 19, 2025) (Director Review) (precedential as to § A) (“*Ecto World*”) (“a petitioner must provide an analysis even when the asserted prior art is on an IDS, but the Examiner did not apply the reference,” and “must explain, with reference to *Becton Dickinson* factors (c), (e), and (f), how the Examiner erred in overlooking the prior art”). We conclude that, based on the particular factual

³ Patent Owner incorrectly states that the Board’s “FWDs” (final written decisions) in the Lectrosonics IPRs were provided to the examiner. *See* Prelim. Resp. 21. We assume this to be a typographical error meant to refer to the decisions on institution, as the final written decisions in the Lectrosonics IPRs were entered on November 7, 2019, and January 24, 2020—after the ’207 patent issued on April 30, 2019. *See* Ex. 1001, code (45); Exs. 1014, 1017, 1018.

circumstances of this proceeding, Petitioner has made a sufficient showing of material error under the second part of the *Advanced Bionics* framework.

With respect to *Becton, Dickinson* factor (c)—“the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection”—the examiner issued a Notice of Allowance after the applicant filed the IDS, but did not include any reasons for allowance in the Notice. Ex. 2028. Petitioner correctly points out that the four asserted references were not the basis for any rejection and were not discussed substantively by the examiner. *See* Pet. 16, 19, 22, 23, 75. Accordingly, factor (c) does not favor denial.

With respect to *Becton, Dickinson* factors (e) and (f)—“whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art” and “the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments”—Petitioner argues that “Strub, Woo, Nagai, and Gleissner were considered by the [Board] in the Lectrosonics IPRs” and, in the final written decisions in those proceedings (entered after issuance of the ’207 patent), “the Board found claims similar to the present [c]hallenged [c]laims unpatentable over those references.”⁴ Pet. 75. Petitioner further points out that the substitute claims added in Patent Owner’s motions to amend in the Lectrosonics IPRs included a limitation of “replacing” audio data with local audio data that is not present in the challenged claims of the

⁴ Petitioner asserts that Patent Owner is collaterally estopped from disputing certain issues that were decided in the Lectrosonics IPRs. Pet. 8–14. As explained below, we are not persuaded on this record that collateral estoppel applies, but determine that Petitioner has met the reasonable likelihood standard for institution regardless. *See infra* Section II.F.5.

'207 patent. *Id.* at 75–76. Thus, Petitioner's position is that the examiner erred in evaluating the four asserted references because the Board later found claims very similar to the challenged claims to be unpatentable based on those references and the Office cancelled the claims. *Id.*; *see Ecto World*, Paper 13 at 5–6 (“[Under the second part of the *Advanced Bionics* framework, a] petitioner . . . may point to the fact that even though the asserted prior art is listed on an IDS, the Examiner did not issue any prior art rejections during examination, so the Examiner materially erred by overlooking certain teachings in the prior art on the IDS.”). In response, Patent Owner disputes Petitioner's “attempt to discount” the examiner's consideration of the references as reflected in the signed IDS and contends that Petitioner does not assert that the Office erred with respect to the challenged claims (as opposed to the claims involved in the Lectrosonics IPRs, which are only alleged to be “similar”). Prelim. Resp. 22.

Petitioner's explanation as to how the challenged claims of the '207 patent are similar to claims found unpatentable in the Lectrosonics IPRs is persuasive on this record. For example, Petitioner compares claim 17 of the '207 patent to claim 37 of the '814 patent, which was found unpatentable over Strub, Woo, and Nagai or Gleissner in IPR2018-01130:

1. A system for recording locally generated audio comprising:

at least one master timecode generator for generating a plurality of master timecodes; and

at least one local audio device wearable by a creator of said locally generated audio including:

at least one local audio device receiver for receiving at least one of the group consisting of digital commands, said master timecodes, and non-local audio data;

at least one audio input port for receiving said locally generated audio from an audio input device;

at least one memory;

at least one local timecode generator for generating a plurality of local timecodes; and

at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator for creating stamped local audio data from said locally generated audio and storing said stamped local audio data in said memory;

wherein said stamped local audio data includes at least one local timestamp to reference at least a portion of said stamped local audio data to at least one of said local timecodes.

37. A system according to claim 1, wherein said local timecode generator is jam synchronized with at least one of said master timecodes received via said local audio device receiver to maintain synchronization of said local timecodes with said master timecodes.

Ex. 1028, col. 23, ll. 18–41, col. 27, ll. 55–59; *see* Pet. 30; Ex. 1018, 32, 63–64.

Claim 17 of the '207 patent and claim 37 of the '814 patent both recite, for instance, (1) a “wearable” audio device for recording/storing “locally generated audio”; (2) a “master timecode generator” that generates and provides a “master timecode” to the audio device; (3) an “audio input port” for receiving the “locally generated audio”; (4) a “memory”; (5) a “local timecode generator” that generates a “local timecode”; (6) a “control unit” that stamps and stores audio data in the “memory”; and (7) jam synchronizing the “local timecode generator” to a “master timecode” of the “master timecode generator.” *See* Pet. 11–12, 30–31, 40–41, 46, 48, 49, 51, 54–55.

Petitioner also compares claim 17 of the '207 patent to (1) claims 12–14 of the '307 patent, which similarly recite wirelessly transmitting the “locally generated audio” and were found to be anticipated by Strub in IPR2018-00972; (2) claim 1 of the '307 patent, which was found unpatentable over Strub and Nagai or Gleissner in IPR2018-00972; and (3) claims 7, 8, and 11 of the '902 patent, which were found unpatentable over Strub, Woo, and Nagai or Gleissner in IPR2018-01129. *See* Pet. 10–12, 30, 37, 53; Ex. 1014, 25–26, 64–65; Ex. 1015, col. 23, ll. 22–42, col. 24, ll. 15–56; Ex. 1017, 35, 73; Ex. 1030, col. 24, l. 51–col. 25, l. 35, col. 25, ll. 61–65.

Although the challenged claims of the '207 patent are worded differently from the claims previously found unpatentable in some respects, as Patent Owner points out, *see* Prelim. Resp. 33–35, we are persuaded on this record that they are sufficiently similar to warrant reconsideration. Further, at the time the IDS with the asserted references and documents from the Lectrosonics IPRs was filed, the Board’s final written decisions in those proceedings and the Federal Circuit’s decisions affirming the Board were not available to the examiner to consider, as those decisions had not yet issued. *See* Exs. 1014, 1017, 1018; *Zaxcom*, 2022 WL 499843; *Zaxcom*, 2022 WL 499848. Based on these unique facts, we determine that factors (e) and (f) do not favor denial.

Petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims under the second part of the *Advanced Bionics* framework. After considering the *Advanced Bionics* framework and the appropriate *Becton, Dickinson* factors, we conclude that

the circumstances of this case do not warrant exercise of our discretion to deny institution based on § 325(d).

C. Legal Standards

A claim is unpatentable for obviousness if, to one of ordinary skill in the pertinent art, “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). The question of obviousness is resolved on the basis of underlying factual determinations, including “the scope and content of the prior art”; “differences between the prior art and the claims at issue”; and “the level of ordinary skill in the pertinent art.” *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Additionally, secondary considerations, such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.”⁵ *Id.* When conducting an obviousness analysis, we consider a prior art reference “not only for what it expressly teaches, but also for what it fairly suggests.” *Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1049 (Fed. Cir. 2019).

A patent claim “is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR*, 550 U.S. at 418. An obviousness determination based on a combination of

⁵ Patent Owner does not present any arguments regarding objective indicia of nonobviousness at this time. *See generally* Prelim. Resp.

references requires finding “both ‘that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367–68 (Fed. Cir. 2016) (quoting *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012)); see *KSR*, 550 U.S. at 418 (for an obviousness analysis, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does”).

“Although the *KSR* test is flexible, the Board ‘must still be careful not to allow hindsight reconstruction of references . . . without any explanation as to *how* or *why* the references would be combined to produce the claimed invention.’” *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016) (quoting *Kinetic Concepts*, 688 F.3d at 1368). Further, an assertion of obviousness “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); accord *In re NuVasive, Inc.*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) (stating that “conclusory statements” amount to an “insufficient articulation[] of motivation to combine”; “instead, the finding must be supported by a ‘reasoned explanation’” (quoting *In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002))); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (“To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific

reasoning, based on evidence of record, to support the legal conclusion of obviousness.”).

D. Level of Ordinary Skill in the Art

Petitioner argues that at the time of the ’207 patent (July 2005), a person of ordinary skill in the art would have had “at least a Bachelor’s degree in electrical engineering or a related or equivalent field, and two or more years of experience working with audio systems,” where “additional years of education in the above-referenced fields may compensate for fewer years of experience.” Pet. 3 (citing Ex. 1002 ¶ 40); *see* Ex. 1002 ¶ 22. Patent Owner contends that a person of ordinary skill in the art would have had “a bachelor’s degree in electrical engineering or a related subject and two to five years’ experience working with multi-track audio and wireless communications systems in the professional performance industry,” where “[l]ess education may be compensated for by a higher level of work experience.” Prelim. Resp. 9 (citing Ex. 2015 ¶ 15; Ex. 2021 ¶ 11). Neither party provides substantive argument in favor of its proposed level of ordinary skill in the art or explains how the difference in proposed levels would impact the obviousness analysis.

Based on the record presented, including our review of the ’207 patent and the types of problems and solutions described in the ’207 patent and cited prior art, we determine that a person of ordinary skill in the art would have had a Bachelor’s degree in electrical engineering and two or more years of experience working with audio and wireless communications

systems, and apply that definition for purposes of this Decision.⁶ *See, e.g.*, Ex. 1001, col. 1, l. 43–col. 2, l. 38 (stating in the “Background of Invention” section of the ’207 patent that “[e]mbodiments of the present invention generally relate to systems and methods for recording and processing audio received from one or more wireless devices” and describing previous systems to “record performance audio” and account for “wireless transmission errors”); Ex. 1018, 11–12 (adopting the same definition for purposes of the ’814 patent).

E. Claim Interpretation

We interpret each challenged claim

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b). “In determining the meaning of [a] disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006). Claim terms are given their plain and ordinary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir.

⁶ To the extent the parties dispute the level of ordinary skill in the art for the ’207 patent or the effective filing date of any of the challenged claims, the parties are encouraged to address the issue in their papers during trial.

2005) (en banc). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Petitioner “does not currently seek construction of any terms,” and “does not present claim constructions or rebut all of Patent Owner’s constructions” in its Preliminary Reply. *See* Pet. 14; Prelim. Reply 1. Patent Owner proposes interpretations for five terms, which we address below. *See* Prelim. Resp. 24–32.

1. “Wearable”

Patent Owner argues that “audio device wearable by a user for storing locally generated audio” in claims 17 and 59 means “a local audio device suitable to be worn by the performer who creates the audio that is recorded by that performer’s local audio device.” Prelim. Resp. 27. Petitioner does not provide a proposed interpretation in its Petition or Preliminary Reply.⁷ *See* Pet. 14; Prelim. Reply 1. In the Lectrosonics IPRs, the Board, applying the broadest reasonable interpretation (BRI) standard, interpreted “wearable” in similarly worded claims to mean “suitable and in a condition to be worn.” *See* Ex. 1014, 10–12; Ex. 1017, 10–12; Ex. 1018, 7–9.

We conclude that interpretation of the term “wearable” is necessary to resolve the parties’ dispute. Patent Owner argues that the ’207 patent describes wearability of local audio devices and requires the local audio

⁷ In the district court case, Petitioner argued that “wearable” means “suitable and in a condition to be worn” and Patent Owner argued that the term means “[s]uitable to be worn by a performer.” *See* Ex. 2006, 13–14.

device to include an audio input device, such as a microphone, that is worn by the performer and connects to the performer's local audio device to capture the performer's isolated audio track. Prelim. Resp. 27–28 (citing Ex. 1001, code (57), col. 11, ll. 13–14, col. 12, ll. 21–25). Patent Owner further argues that the prosecution history of parent U.S. Patent No. 7,711,443 B1 (“the ’443 patent”) “clarifies that ‘wearable’ requires the audio device to be ‘suitable to be worn by the performer’ and excludes devices that are merely portable (e.g., able to be carried in a backpack).” Prelim. Resp. 28–29. Patent Owner argues that the Notice of Allowance for the ’443 patent distinguishes between “portable” and “wearable” where the prior art of record taught a portable device that could be carried in a backpack, which the Examiner found did not teach a “wearable” limitation of the claims at issue. *Id.* (citing Ex. 2017).

We agree with Patent Owner's analysis to the extent it specifies that the audio device is “suitable to be worn,” but do not include “performer” in the interpretation, as claims 17 and 59 instead recite an audio device wearable by a “user.” *See* Prelim. Resp. 27–28. Indeed, claim 48, which depends indirectly from claim 17, recites that “the user is a performer.” *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004) (“the presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim”). Based on the current record, we interpret “wearable” as “suitable and in a condition to be worn.”

2. “Locally Generated Audio”

Patent Owner argues that “locally generated audio” in claims 17 and 59 means “audio created by the wearer of the local audio device receiving the locally generated audio, such audio suitable for use as an independent track of audio.” Prelim. Resp. 25; Prelim. Sur-Reply 3–5. Patent Owner contends that this interpretation requires the creation of “an individual, isolated audio track to be used and independently edited in the resultant multitrack recording,” and any definition that “collects all event audio on a single track of mixed audio without individual, isolated tracks of audio per performer/audio source directly contradicts the requirement for ‘multitrack’ recording.” Prelim. Resp. 25–26. Petitioner does not propose an alternative interpretation, but argues that Patent Owner’s proposal is overly narrow, as it essentially imports two requirements: (1) that the audio device be actually worn by the creator of the audio; and (2) that the audio be suitable for use as an independent track of audio. Prelim. Reply 3–4. The Board did not interpret “locally generated audio” in the Lectrosonics IPRs.⁸

We conclude that no express interpretation of “locally generated audio” is necessary to determine whether to institute an *inter partes* review because, even if Patent Owner’s interpretation is adopted, Petitioner has shown sufficiently that Strub teaches “locally generated audio.” *See infra* Section II.F.5.d; *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“Because we need only construe

⁸ In the district court case, Petitioner argued that “locally generated audio” means “analog audio generated local to an audio device,” and Patent Owner argued that the phrase means “[a]udio created by the wearer of the local audio device that is suitable for use as an independent track of audio.” *See* Ex. 2006, 22–23.

terms ‘that are in controversy, and *only to the extent necessary* to resolve the controversy,’ we need not construe [a particular claim limitation] where the construction is not ‘material to the . . . dispute.’” (citation omitted) (emphasis added)). The parties, however, are encouraged to address interpretation of the phrase during trial.

3. “*Master Timecode Generator*” and “*Master Timecode*”

Patent Owner argues that “master timecode generator” should be interpreted to mean “a producer of a master time reference signal that controls at least one other timecode generator” and “master timecode” should be interpreted to mean “a time reference signal used to synchronize at least one device.” Prelim. Resp. 29. Petitioner does not provide proposed interpretations for the terms in its Petition or Preliminary Reply.⁹ See Pet. 14; Prelim. Reply 1. In two of the Lectrosonics IPRs, the Board, applying the BRI standard, interpreted “master timecode generator” in similarly worded claims to mean “a producer of a plurality of master timecodes controlling other time code generators.” See Ex. 1017, 12–14; Ex. 1018, 9–10. The Board noted that the specifications of the patents at issue “clearly provide[] support for the plain and ordinary meaning of master timecode generator—controlling other time code generators.” *Id.*

⁹ Petitioner argued in the district court case that “master timecode generator” means “a producer of a plurality of master timecodes controlling other time code generators” or “a producer of a master time reference signal comprising hours, minutes, seconds, and frames, that controls at least one other timecode generator,” and “master timecode” means a “code[] synchronizing audio samples.” See Ex. 2006, 9–12.

Claims 17 and 59 recite a control unit operable to “receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode.” Patent Owner’s proposed interpretation of “master timecode generator” is very similar to the one previously adopted by the Board and differs in only minor ways that appear to be commensurate with the language of claims 17 and 59. For example, Patent Owner’s proposed interpretation includes “at least one” other timecode generator, as the claims recite “a” local timecode generator. Likewise, Patent Owner’s proposed interpretation omits the language of the Board’s interpretation requiring “a plurality of master timecodes,” as the claims recite receiving “a master timecode.”

We also agree with Patent Owner that the “master timecode generator” produces a signal that “controls” another timecode generator. *See* Prelim. Resp. 29 (citing a dictionary definition of “master” as “[one] that has control over another or others,” Ex. 2019, 3). We see no basis, however, to limit the claim term to a particular *type* of control. Patent Owner points to Figure 5 of the ’207 patent where “the speed of the local timecode generator and the sample rate of the [analog to digital converter (ADC)] are increased to maintain synchronization with the master timecode generator.” Ex. 1001, col. 16, ll. 4–7, Fig. 5; *see* Prelim. Resp. 29. But Figure 5 merely depicts an exemplary “process for modifying the speed of a local timecode generator as necessary to maintain its synchronization with a master timecode generator in accordance with one embodiment.” *See* Ex. 1001, col. 3, ll. 16–19, col. 11, ll. 29–35 (synchronization may occur “using a process such as that described below” for Figure 5). And the Specification expressly

contemplates “alternate embodiments.” *See, e.g., id.* at col. 2, ll. 56–63, col. 16, ll. 7–10, 37–40 (“Although FIG. 5 depicts one method of performing a feedback loop, many variations of this feedback loop may be substituted without departing from the scope of the present invention.”), col. 43, ll. 13–19. Likewise, the Specification describes the exemplary embodiment of Figure 6 as a master unit providing master timecodes to a local audio device, which “synchronizes (e.g., jam syncs) its respective on board local timecode generator with the master timecodes,” but does not specify exactly how the master unit exercises control. *Id.* at col. 17, ll. 9–18; *see* Prelim. Resp. 29–30. Also, claim 37, which depends from claim 17, recites that “synchroniz[ing] the local timecode generator to the master timecode generator is performed via varying . . . the speed of the local timecode generator.” Thus, we do not include any particular control mechanism (e.g., changing the speed of the local timecode generator) in our interpretation at this time.¹⁰

Based on the current record, we interpret “master timecode generator” as “a producer of a master time reference signal that controls at least one other timecode generator” and “master timecode” as “a time reference signal used to synchronize at least one device.”

¹⁰ To the extent the parties disagree as to the meaning of “control[]” in the adopted interpretation, the parties are encouraged to address the issue in their papers during trial and, if necessary, provide a more descriptive interpretation for “master timecode generator,” citing support in the Specification and/or prosecution history of the ’207 patent.

4. *“Jam Synchronize the Local Timecode Generator to the Master Timecode Generator”*

Patent Owner argues that “jam synchronize the local timecode generator to the master timecode generator” in claims 17 and 59 should be interpreted to mean “align[] the internal clock of the local timecode generator with the internal clock of the master timecode generator,” citing the parties’ agreement in the district court case that “jam synchronize” means “aligning the internal clock of one device, program or application with the internal clock of another device, program or application,” as well as various allegedly supporting disclosures in the Specification of the ’207 patent. Prelim. Resp. 30–31 (quoting Ex. 2006, 8; citing Ex. 1001, col. 6, ll. 3–8, col. 14, ll. 52–56, col. 17, ll. 11–16). We agree with and adopt Patent Owner’s proposed interpretation based on the current record.

F. Obviousness Ground Based on Strub, Woo, Nagai, and Gleissner

Petitioner contends that claims 17–19, 21–23, 33, 34, 59, 60, and 66 are unpatentable over Strub, Woo, Nagai, and Gleissner under 35 U.S.C. § 103(a), citing the testimony of Chris Kyriakakis, Ph.D., as support. Pet. 24–73 (citing Ex. 1002). Patent Owner responds, citing the testimony of James M. DeFilippis, P.E., and Jack Norflus as support. Prelim. Resp. 32–61 (citing Exs. 2015, 2021). We are persuaded that Petitioner has established a reasonable likelihood of prevailing on its asserted ground as to claim 17. *See* 37 C.F.R. § 42.108(a).

1. Strub

Strub, titled “Hybrid Recording Unit Including Portable Video Recorder and Auxiliary Device,” is directed to “recording of [an] event by

multiple participants (i.e., from multiple points of view), often simultaneously.” Ex. 1003, col. 1, l. 25–31. Strub discloses a “hybrid recording unit” that is “constructed by adding to a portable video recorder (e.g., camcorder, portable dockable videotape recorder (VTR)) one or more devices (an ‘auxiliary device’) that provide additional functionality to the portable video recorder.” *Id.* at col. 5, ll. 23–29. “The auxiliary device can advantageously provide, for example, one or more of the following capabilities: marking, position sensing, physiological monitoring and/or biometric identification.” *Id.* at col. 5, ll. 29–32. The hybrid recording unit is adapted to obtain a visual recording of the event as well as an audio recording of the event. *Id.* at col. 8, ll. 44–52. Multiple hybrid recording units may record a single event and one recording unit may transmit its recording to another recording unit. *Id.* at col. 37, ll. 18–40, col. 38, ll. 8–10.

Figure 1 of Strub is reproduced below.

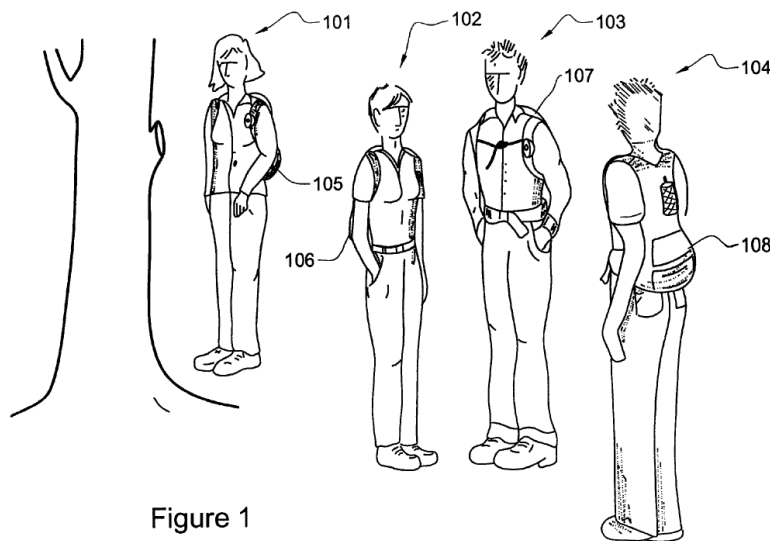


Figure 1

Figure 1 depicts four participants 101–104, equipped with respective recording units 105–108, who “are participating in, or observing, an event.” Ex. 1003, col. 8, ll. 7–13.

Figure 3 of Strub is reproduced below.

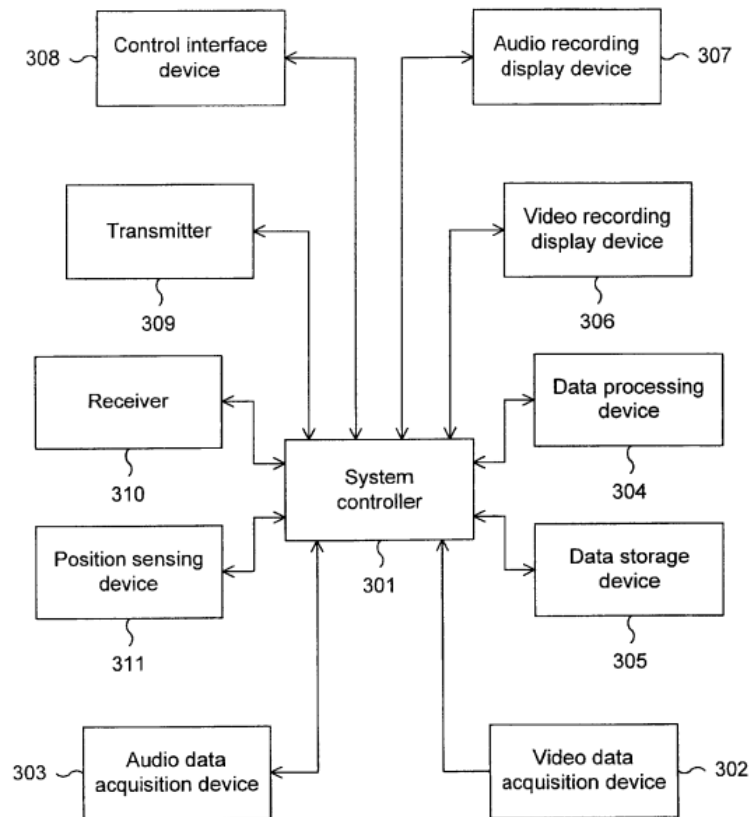


Figure 3 depicts the components of recording unit 300, including system controller 301, audio data acquisition device 303, data storage device 305, and transmitter 309. Ex. 1003, col. 11, l. 57–col. 12, l. 52. “[T]ransmitter 309 transmits signals . . . representing recording data acquired by the recording unit 300, so that such recording data can be used by other recording units (e.g., . . . to enable processing of recording data obtained by the recording unit 300).” *Id.* at col. 12, ll. 31–39. Strub also describes a global positioning system (GPS) receiver in the recording unit

to receive a signal representing the current time that can be used as a clock to generate time-stamps for the recording data. Depending upon the speed of the processing device(s) of the recording unit, the GPS time signal can be updated about once a second. The GPS time signals are extremely accurate; thus, since

all of the recording units are receiving this time signal, the time-stamps of all recording units are adequately synchronized.

Though the recording unit must not be constantly blocked from GPS satellites in order for the recording unit to receive such time signals, the recording unit need only be exposed to a GPS satellite for about a minute to enable the time signals to begin. Further, after that point, clock drift occurs slowly, even if the recording unit is blocked from the GPS satellites for a period of time. Additionally, a recording unit according to the invention typically also includes an internal clock, as described above, that, while not as accurate as the GPS time signals, can also be used to accurately time-stamp data.

Id. at col. 63, ll. 41–60.

2. *Woo*

Woo is directed to a “time-keeping system for synchronizing sound and picture recordings from a plurality of independent recording devices at a shared performance.” Ex. 1004, col. 4, ll. 62–66. The time-keeping system includes a master clock comprising GPS navigation satellite receiver 122 and digital signal processor 124. *Id.* at col. 8, ll. 60–65, Fig. 5. Master clock output 128 is a SMPTE (Society of Motion Picture and Television Engineers)-formatted timecode that is preferably compatible with commercially available equipment that has master clock input ports. *Id.* at col. 5, ll. 42–53, col. 9, ll. 1–4, Fig. 5.

Figure 1 of Woo is reproduced below.

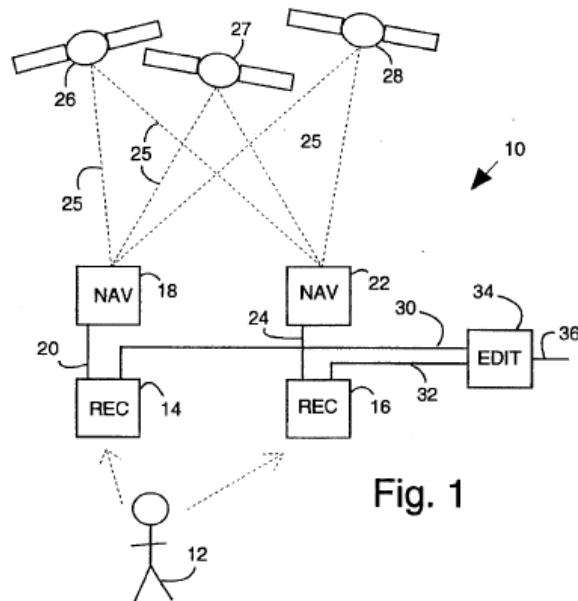


Figure 1 depicts time-keeping system 10 for “synchronizing sound and picture recordings from a plurality of independent recording devices at a shared performance.” Ex. 1004, col. 4, ll. 62–66. “[R]ecorder 14 captures the performance from its vantage point while another recorder 16 independently captures the same performance from its own vantage point.” *Id.* at col. 5, ll. 3–5. “[N]avigation satellite receivers 18 and 22 receive a plurality of microwave radio transmissions 25 from a constellation of orbiting satellites” 26–28 and provide “highly-accurate date and time information” to recorders 14 and 16 over connections 20 and 24. *Id.* at col. 5, ll. 5–8, 21–30. “The recorders 14 and 16 each transmit their respective recordings over a pair of connections 30 and 32 to an editing station 34,” where “[e]ach recording delivered to the editing station 34 has been date and time tagged, using date and time information received by the recorders 14 and 16.” *Id.* at col. 5, ll. 37–46.

Figure 5 of Woo is reproduced below.

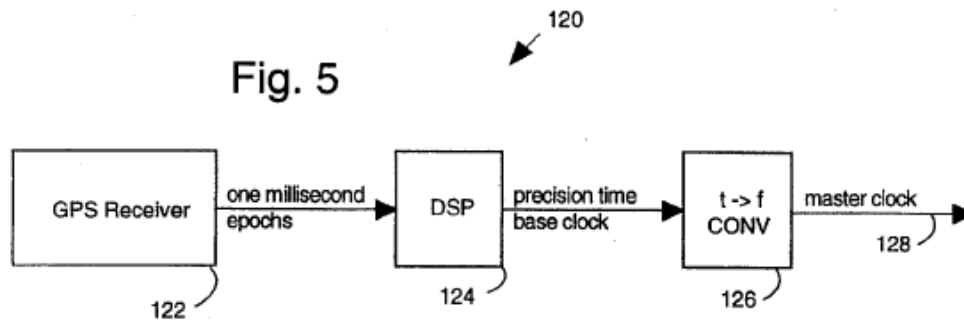


Figure 5 depicts master clock 120 comprising “GPS navigation satellite receiver 122 and . . . digital signal processor 124 for accumulating and averaging code epochs which occur each millisecond in time and having a precision time-base output,” and time-period-to-frequency converter 126 with “precision clock output 128 for synchronizing film and video equipment.” Ex. 1004, col. 8, l. 60–col. 9, l. 1. “[C]lock output 128 is conventionally formatted and distributed, and is preferably compatible with present-day commercially-available equipment that have master clock input ports.” *Id.* at col. 9, ll. 1–4.

3. Nagai

Nagai is directed to a “data recording and reproducing apparatus” for recording and reproducing voice data. Ex. 1005 ¶¶ 2–5. Nagai’s apparatus includes an audio input, a headphone jack for audio output, a memory card to store audio data, and a USB port for transferring audio data to another device. *Id.* ¶¶ 106, 125, 126, 139, 140, 145, Figs. 1, 2A, 2B.

4. Gleissner

Gleissner is directed to an audio data recorder that includes a microphone unit and a recording appliance (audio data recorder) connected

to one another via a plug connection. Ex. 1006 ¶ 10. The plug connection between the microphone unit and recording appliance provides both an electrical connection and a rigid mechanical connection. *Id.* The recording appliance may further be connected to headphones to allow a user to simultaneously hear the input into the microphone. *Id.* ¶ 33.

5. Claim 17

a) Collateral Estoppel

Petitioner argues that Patent Owner is collaterally estopped from disputing (1) the presence in the cited references of certain limitations, and (2) the obviousness of combining Strub, Woo, Nagai, and Gleissner, because the issues are identical to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the Lectrosonics IPRs; and Patent Owner had a full and fair opportunity to litigate the issues in the Lectrosonics IPRs. Pet. 8–13 (citing *Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1381 (Fed. Cir. 2022)). Petitioner also argues that Patent Owner is collaterally estopped from relying on “the same or substantially similar objective indicia of [non]obviousness” from the Lectrosonics IPRs in this proceeding for similar reasons. *Id.* at 13–14.

Patent Owner argues that collateral estoppel does not apply because the Board applied the BRI standard to the claims challenged in the Lectrosonics IPRs, so no claim interpretation was ever rendered under the *Phillips* standard and “issues regarding obviousness, which rely on such claim constructions, have also not been litigated.” Prelim. Resp. 22–24 (citing *SkyHawke Techs., LLC v. Deca Int’l Corp.*, 828 F.3d 1373, 1376

(Fed. Cir. 2016)). Patent Owner argues that “[w]here a first IPR is decided under the BRI standard, and a second IPR concerning the same patent is to be decided under the *Phillips* standard, ‘collateral estoppel . . . is not appropriate.’” *Id.* at 23 (citing *Ebates Performance Mktg., Inc. v. Int’l Bus. Machines Corp.*, IPR2022-00646, Paper 56 at 10 (PTAB Oct. 11, 2023)).

We agree with Patent Owner based on the current record. Although the Lectrosonics IPRs involved patents from the same family as the ’207 patent, which recite many similar claim limitations, the Lectrosonics IPRs were all decided using the BRI standard, not the *Phillips* standard. Thus, no claim interpretation has been made using the standard that will be applied in this case, and the asserted prior art has not been applied to claims interpreted according to the standard in this case. Accordingly, on this record, we are not persuaded that collateral estoppel applies to any of the disputed issues in this proceeding. *See DDR Holdings, LLC v. Priceline.com LLC*, 122 F.4th 911, 918–919 (Fed. Cir. 2024) (“‘Because the Board applies the broadest reasonable construction of the claims while the district courts apply a different standard of claim construction as explored in *Phillips*,’ a party is not collaterally estopped in district court proceedings by the Board’s constructions during IPR.”); *SkyHawke*, 828 F.3d at 1376. Regardless, we determine that Petitioner has shown a reasonable likelihood of prevailing on its asserted grounds as to claim 17 based on the preliminary claim interpretations applied herein. *See supra* Section II.E.

b) Undisputed Limitations

Petitioner argues that Strub, Woo, Nagai, and Gleissner collectively teach all of the limitations of claim 17. Pet. 24–57. The preamble of claim

17 recites “[a]t least one audio device wearable by a user for storing locally generated audio and transmitting the locally generated audio to a remote device, the remote device including at least one of a receiver, a recorder, a mixer, and combination thereof.”¹¹ Petitioner argues that Strub teaches an “audio device” (i.e., any “one of recording units 105–108, 200, and 300” shown in Figures 1–3) that stores and transmits audio to a “remote device” (i.e., “a different one of recording units 105–108, 200, and 300”) with a “receiver” (i.e., receiver 310 shown in Figure 3). *Id.* at 30–34. Petitioner further contends that the preamble also is taught by Woo, identifying an alleged “audio device” (i.e., “an arrangement comprising recorder 14, GPS receiver 18, and time code generator 43, or an arrangement comprising recorder 16, GPS receiver 22, and time code generator 43”) and “remote device” (i.e., editing station 34) in Woo. *Id.* at 34–37.

Claim 17 next recites five components of the “audio device.” Petitioner argues that Strub teaches a [A] “wireless transmitter” (i.e., wireless transmitter 309); [B] “audio input port configured to couple to an audio input device to receive the locally generated audio” (i.e., system controller 301’s “connection to audio input device 303 (*e.g.*, microphone)”); [C] “memory” (i.e., data storage device 305); [D] “local timecode generator operable to generate a local timecode” (i.e., an “internal clock” that

¹¹ On the record before us, we determine that the preamble is limiting at least because the body of the claim refers to the preamble for antecedent basis for the terms “locally generated audio” and “remote device.” *See Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.”). Even if it was not, though, limitations 17[B], 17[G], and 17[H] recite the “locally generated audio” and “remote device.”

generates “a signal indicating the time”); and [E] “control unit coupled to the wireless transmitter, the audio input port, the memory, and the local timecode generator” (i.e., “system controller 301 and/or data processing device 304”). Pet. 37–51. Petitioner asserts that, “[t]o the extent [Patent Owner] contends that Strub does not disclose” limitation 17[B], Nagai and Gleissner teach the recited “audio input port,” identifying the “‘mike jack’ 2 or 64” in Nagai and the “XLR plug connector” in Gleissner. *Id.* at 43–45.

Finally, limitation 17[I] recites that the control unit is operable to “stamp at least a portion of the audio data with the local timecode.” Petitioner argues that Strub describes system controller 301 as having “a clock that is used to time-stamp the recording data obtained by the recording unit,” where the time-stamp can be used “to enable post-event synchronization of the display of recordings obtained by different recording units.” Pet. 55–56 (quoting Ex. 1003, col. 13, ll. 50–58). Similarly, Petitioner contends that Woo describes recorders 14 and 16 transmitting recordings that were “date and time tagged, using date and time information received by the recorders 14 and 16” from navigation satellite receivers 18 and 22. *Id.* at 56–57 (quoting Ex. 1004, col. 5, ll. 37–45).

Patent Owner disputes whether the cited references teach a “wearable” audio device and “locally generated audio,” but does not otherwise dispute the above limitations of claim 17. *See* Prelim. Resp. 32–46. Petitioner’s analysis for the above limitations, supported by the testimony of Dr. Kyriakakis, is persuasive based on the current record. *See* Pet. 30–51, 55–57; Ex. 1002 ¶¶ 117–138, 143–150, 160–165.

c) “Wearable” Audio Device: Limitation 17[Pre]

Petitioner argues that Strub’s recording units, shown in Figures 1 and 3, for example, are “wearable” by a user, as recited in the preamble of claim 17. Pet. 31–33. As explained above, we interpret “wearable” to mean “suitable and in a condition to be worn.” *See supra* Section II.E.1.

Patent Owner argues that Petitioner has not established that Strub teaches an “audio device wearable by a user for storing locally generated audio.” Prelim. Resp. 39–46. Patent Owner argues that Strub teaches different variations of recording units, some of which Patent Owner calls the “Basic Strub Recording Unit” and some of which Patent Owner calls the “Advanced Strub Recording Unit.” *Id.* at 40. Patent Owner argues that Strub describes recording units 105–108 and recording unit 200 as Basic Strub Recording Units without any mention of a receiver, a transmitter, or an ability to transmit or receive data. *Id.* (citing Ex. 1003, col. 8, ll. 13–29, Fig. 2). Patent Owner argues that Strub describes recording unit 300 as an Advanced Strub Recording Unit that includes a transmitter and receiver, for which data acquisition is performed by a video data acquisition device and an audio data acquisition device, instead of the single data acquisition device of the Basic Strub Recording Units. *Id.* (citing Ex. 1003, col. 11, ll. 48–50, col. 12, ll. 13–16).

According to Patent Owner, Petitioner cites recording unit 300 as the “audio device” recited in claim 17, but cites Figure 1, which only refers to recording units 105–108, to show wearability of the recording units. Prelim. Resp. 40–41 (citing Pet. 31). Patent Owner argues that recording units 105–108 cannot be equated to the audio device of claim 17 because these Basic Strub Recording Units do not contain a transmitter and receiver and

Petitioner has made no showing of Strub teaching an Advanced Strub Recording Unit that contains a transmitter and receiver and is also wearable. *Id.* In support of this argument, Patent Owner argues that Strub (1) at col. 4, ll. 21–31 teaches a Basic Strub Recording Unit with no receiver or transmitter; (2) at col. 14, l. 59–col. 15, l. 11 and col. 16, l. 66–col. 17, l. 24 describes wearability of a visual acquisition device, not the recording unit, which shows that the visual acquisition device is not wearable because it must be attached to a wearable apparatus; (3) at col. 38, l. 65–col. 39, l. 11 describes wearability of an audio communication device, not a recording unit; (4) at col. 66, ll. 33–51 describes a data acquisition device, which is used in the Basic Strub Recording Unit, and this device may not even be wearable; and (5) at col. 67, l. 54–col. 68, l. 10 and col. 72, ll. 9–19 refers to the wearability of a Basic Strub Recording Unit with no receiver or transmitter. Prelim. Resp. 41–43.

We disagree with Patent Owner’s arguments based on the current record. Patent Owner cites various disclosures in Strub, arguing that they break down into two categories—Basic and Advanced Strub Recording Units. But this distinction is not supported by Strub’s teachings. As cited by Petitioner, *see* Pet. 33, Strub teaches that its recording units may include many potential combinations of components and that the goal of packaging these components together is to achieve a small, light, unobtrusive recording unit that is comfortable to wear, *see* Ex. 1003, col. 66, ll. 33–51. Petitioner identifies teachings in Strub regarding potential components of recording units, including communications devices such as the transmitter and receiver. Pet. 37–38 (citing Ex. 1003, col. 35, l. 51–col. 36, l. 29). Petitioner identifies teachings in Strub indicating that it would be desirable

to include many of these components in a single apparatus that is easily worn. *Id.* at 33 (citing Ex. 1003, col. 4, ll. 21–31 (describing “a small, lightweight, wearable recording unit”), col. 66, ll. 33–51 (disclosing goals of making the recording unit “small,” “comfortable to wear,” and “as lightweight as possible”)). Strub teaches that certain components may be excluded from this apparatus to keep the recording unit as compact as possible, but the transmitter and receiver are not included in this exclusion list. *See* Ex. 1003, col. 66, ll. 33–51. Accordingly, Patent Owner’s argument that Strub distinguishes between two categories of recording units such that Petitioner errs by relying on “Basic Strub Recording Units” for wearability is unsupported on the current record.

Moreover, the visual and audio acquisition devices described by Patent Owner as separate from the recording unit may be internal components of the recording unit or may be connected to a recording unit that is worn by a recorder. Claim 17 recites “[a]t least one audio device wearable by a user for storing locally generated audio . . . comprising . . . an audio input port configured to couple to an audio input device to receive the locally generated audio.” In other words, the audio input device may be separate from the claimed audio device that is wearable by a user for storing locally generated audio.

Finally, to the extent Patent Owner asserts that Strub’s recording units are not suitable to be worn by a “performer” because “they are too large, visible, heavy, and imposing to be worn during the filming of performances,” we are not persuaded, because we have interpreted “wearable” more broadly, to require only a “user.” *See* Prelim. Resp. 43–45; *supra* Section II.E.1.

At this stage, we find that Petitioner has made a sufficient showing that Strub teaches a “wearable” audio device as recited in claim 17.

d) “Locally Generated Audio”: Limitations 17[Pre], 17[G], and 17[H]

The preamble of claim 17 recites that the audio device is “for storing locally generated audio and transmitting the locally generated audio to a remote device.” Limitations 17[G] and 17[H] recite that the control unit is operable to “transmit the locally generated audio to the remote device via the wireless transmitter” and “store the locally generated audio in the memory as audio data,” respectively. Petitioner identifies as “locally generated audio” the audio that is captured by receiver 310, transmitted by transmitter 309, and stored in data storage device 305 of Strub’s recording unit. Pet. 31–34, 53–55. Petitioner asserts that Woo teaches “locally generated audio” as well, identifying the audio captured and stored by recorders 14 and 16 and transmitted to editing station 34. *Id.* at 34–37, 53–55.

Patent Owner argues that Strub and Woo teach “the opposite of ‘locally generated audio’” because their audio is “locally ‘received’ or ‘heard’ by a recorder,” not “generated, or created, by the recorder.” Prelim. Resp. 36 (citing Ex. 1003, col. 22, ll. 16–33; Ex. 1004, col. 5, ll. 3–5). Patent Owner asserts that this “heard” audio is not suitable for multi-track recording because it “does not include individual, isolated tracks of audio” for each performer that can be independently edited. *Id.* at 36–37 (quoting Ex. 2015 ¶ 232; citing Ex. 2021 ¶ 15).

Petitioner argues that even under Patent Owner’s construction, Strub teaches “locally generated audio.” Prelim. Reply 5. In particular, Petitioner argues that Strub teaches recording units that “may be ‘worn’ by a person

‘participating in’ as opposed to merely ‘observing’ an event.” *Id.* (citing Ex. 1003, code (57), col. 1, ll. 24–35, col. 8, ll. 6–26, col. 11, ll. 3–17, Fig. 1). According to Petitioner, Strub provides examples, such as participants singing “Happy Birthday,” playing ping pong, and participating in a group hike or family trip to an amusement park. *Id.* (citing Ex. 1003, col. 2, ll. 55–65, col. 47, ll. 33–39, col. 52, ll. 19–24, col. 67, l. 59–col. 68, l. 2). Petitioner argues that each audio device records “‘an independent track of audio’ distinct from the recordings of other devices since they are not co-located and would receive sound differently.” *Id.* Petitioner contends that Patent Owner provides no evidence that multiple voices, including those of people not wearing the audio device, “cannot be recorded as an independent audio track.” *Id.*

We disagree with Patent Owner’s arguments based on the current record. Although Strub describes embodiments where the focus of the recording performed by the audio device is on sounds primarily in front of the recorder, as cited by Patent Owner, *see* Prelim. Resp. 36 (citing Ex. 1003, col. 22, ll. 16–33), Petitioner also has identified embodiments where the audio device captures audio created by the wearer of the device, *see* Prelim. Reply 5. Indeed, Strub refers to the recorder’s participation in the event being recorded repeatedly throughout its disclosure, providing multiple examples as Petitioner points out. *See id.*

At this stage, we find that Petitioner has made a sufficient showing that Strub teaches “locally generated audio” as recited in claim 17.

e) “*Master Timecode Generator*,” “*Master Timecode*,” and
“*Jam Synchronize*”: *Limitation 17[F]*

Limitation 17[F] recites that the control unit is operable to “receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode.” As explained above, we interpret “master timecode generator” as “a producer of a master time reference signal that controls at least one other timecode generator,” “master timecode” as “a time reference signal used to synchronize at least one device,” and “jam synchronize the local timecode generator to the master timecode generator” as “align the internal clock of the local timecode generator with the internal clock of the master timecode generator.” *See supra* Sections II.E.3–4.

Petitioner argues that “Strub discloses receiving a master timecode—*e.g.*, GPS time information—from a master timecode generator—*e.g.*, a GPS satellite or SMPTE timecode source—and jam synchronizing the local timecode generator—the internal clock—to the master timecode generator using the master timecode.” Pet. 51–52 (citing Ex. 1003, col. 62, ll. 53–54, col. 63, ll. 50–60, col. 75, ll. 25–57, col. 79, l. 63–col. 80, l. 7, Fig. 3; Ex. 1002 ¶ 152). Petitioner further contends that, “[t]o the extent [Patent Owner] contends that Strub does not disclose” limitation 17[F], “Woo discloses receiving a master timecode from a master timecode generator—*e.g.*, one or more of GPS satellites 26–28—and jam synchronizing the local timecode generator 43 to the satellite(s) using the master timecode.” *Id.* at 18–19, 52–53 (citing, *e.g.*, Ex. 1004, col. 3, ll. 37–45, col. 5, ll. 5–10, 21–29, col. 7, ll. 26–47, col. 8, l. 60–col. 9, l. 4, Figs. 2–4; Ex. 1002 ¶ 153). And Petitioner provides reasons why a person of ordinary skill in the art would have been motivated to modify Strub’s system to incorporate Woo’s method

of synchronizing a local timecode generator to a master timecode generator. *Id.* at 24–29. At this stage, we find that Petitioner has made a sufficient showing that Woo teaches limitation 17[F].¹²

Patent Owner, relying on the testimony of Mr. DeFilippis, argues that “there is no teaching that Woo’s master clock produces a time reference signal used to synchronize at least one device via the control of at least one other (slave) timecode generator.” Prelim. Resp. 53 (quoting Ex. 2015 ¶ 259). Patent Owner contends that “there is no mention of any such secondary timecode generator in Woo, let alone that they are controlled by Woo’s master clock.” *Id.* Mr. DeFilippis explains that “[t]he mere disclosure of a master clock and master clock input ports on commercially-available equipment does not nearly meet the requirements of the claimed ‘master timecode generator’ that is a producer of a master time reference signal that controls at least one other timecode generator.” *Id.* (quoting Ex. 2015 ¶ 260). Mr. DeFilippis further opines that Woo needs to combine the time output of its GPS receiver with “a highly accurate pulse because the output of the GPS receiver is insufficient to achieve synchronization,” whereas the ’207 patent “produces timecodes having sufficient data to synchronize audio segments.” *Id.* at 53–54 (quoting Ex. 2015 ¶ 261; citing Ex. 1004, col. 8, ll. 13–18).

¹² As explained above, Petitioner alternatively argues that Strub alone teaches the limitation, and the parties make various arguments regarding Strub’s disclosure. *See* Pet. 51–52; Prelim. Resp. 46–53; Prelim. Reply 1–3; Prelim. Sur-Reply 1–3. We need not evaluate Petitioner’s alternative arguments regarding Strub at this time, given Petitioner’s showing regarding the combination with Woo.

We disagree based on the current record. Woo teaches providing master timecodes in SMPTE format for the purpose of synchronizing recorded data from independent sound, film, and video recorders. *See* Ex. 1004, codes (54), (57), col. 3, ll. 20–24, col. 4, ll. 13–15; Pet. 52–53. As shown in Figure 5, “master” clock 120, comprising GPS navigation satellite receiver 122, digital signal processor 124, and time-period-to-frequency converter 126, receives a GPS time signal and provides a “precision clock output . . . for synchronizing film and video equipment.” Ex. 1004, col. 8, l. 60–col. 9, l. 1. Woo further describes the “slave” or “jam-sync” process, which “allows a time code generator to *follow* the time code off another source.” *Id.* at col. 3, ll. 38–41 (emphasis added), col. 7, ll. 29–38 (“A commercially-available time code generator 43 . . . generates time code[s] . . . and will jam to both the output connection 38 and normal SMPTE/EBU time code.”). Thus, based on the current record, Petitioner has explained sufficiently how the GPS time signal in Woo is used to control, via the jam-sync process, the local timecode generator of the recorder. *See* Pet. 52–53; Prelim. Reply 3.

Patent Owner also makes various arguments in its Preliminary Sur-Reply pertaining to the issue of “control” of the local timecode generator. *See* Prelim. Sur-Reply 1–2. Patent Owner contends that the GPS signals in Strub and Woo “provide time information to their internal clocks” but “do not exercise control over *how the internal clocks operate (e.g., the speed of such clocks)*.” *Id.* at 1 (emphasis added). Likewise, Patent Owner argues that “the reliability of a GPS time signal . . . is entirely contingent upon continuous signal availability because Strub and Woo do not teach the ability of the GPS signals to control *the operation of the internal clocks*.”

Id. at 2 (emphasis added). As explained above, we preliminarily interpret “master timecode generator” to mean “a producer of a master time reference signal that controls at least one other timecode generator,” but do not limit the term to any particular type of control. *See supra* Section II.E.3. On this record, we do not see any requirement in the claim that the master time reference signal control the *operation* of an internal clock of the local timecode generator (e.g., by modifying the speed of such a clock).

Limitation 17[F] merely recites that the control unit receives a master timecode from the master timecode generator and jam synchronizes the local timecode generator to the master timecode generator using that timecode—i.e., it *aligns* the internal clock of the local timecode generator to the internal clock of the master timecode generator. *See supra* Sections II.E.3–4. Also, to the extent Patent Owner asserts that the master timecode generator must itself “control[] how the local timecode generator operates,” we disagree; our preliminary interpretation specifies that it is the master time reference *signal* that “controls” the other timecode generator. *See* Prelim. Sur-Reply 1–2; Ex. 2015 ¶¶ 50, 93.

Next, relying on the testimony of Mr. Norflus, Patent Owner argues that “GPS or satellite reception of time code[s] is unreliable and not a viable solution for the transmission or reception of timecode[s],” as “[t]here are many instances where receiving a GPS signal would just not be possible” (e.g., “recording studios” or “underground locations”). Prelim. Resp. 54 (quoting Ex. 2021 ¶ 27); Prelim. Sur-Reply 2–3. The ’207 patent, by contrast, “provides for accurate transmission of master timecodes in all locations including those not accessible by satellite signals” according to Patent Owner. Prelim. Resp. 54–55. Claim 17, however, does not include

any requirement for synchronization from “all” locations or instances—the relevant question is whether the device based on the combined teachings of Strub and Woo would have a control unit operable to “receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode.” Based on Woo’s disclosure discussed above regarding a recorder being capable of and actually receiving a GPS time signal for use in synchronization, Petitioner has made a sufficient showing on this record. *See, e.g.*, Ex. 1004, col. 3, ll. 38–41, col. 7, ll. 27–53, col. 8, l. 60–col. 9, l. 4, Figs. 1, 3, 5.

Finally, Patent Owner argues that Strub does not teach a control unit operable to “jam synchronize” as recited in limitation 17[F]. Prelim. Resp. 55. Again, Petitioner on this record has made a sufficient showing with respect to Woo and we need not evaluate Petitioner’s alternative arguments regarding Strub. The “slave” or “jam-sync” process described in Woo allows the local timecode generator to “follow the time code off another source” (i.e., a GPS satellite providing the GPS time signal). Ex. 1004, col. 3, ll. 38–41, col. 7, ll. 29–38; *see* Pet. 52–53.

At this stage, we find that Petitioner has made a sufficient showing that Woo teaches limitation 17[F].

f) Analogous Art

Patent Owner argues that Strub and Woo are both non-analogous art because they are neither in the same field of endeavor as the claimed invention nor reasonably pertinent to the problems faced by the inventors of the ’207 patent. Prelim. Resp. 58–59. Patent Owner contends that Strub and

Woo are not in “the field of multi-track recording” and Strub is not in “the field of professional sound recording.” *Id.* at 58. Patent Owner further asserts that “Woo discloses a ‘GPS receiver [that] comprises a data output port for communicating time code information formatted according to standards,’” whereas the claimed invention “does not mention any ‘GPS satellite or receiver; it instead relates to using a master timecode generator to control other timecode generators in other recorders”” and “GPS signals are known to be incompatible with performance recording as many recording locations . . . are not capable of receiving satellite signals.” *Id.* at 58–59 (quoting Ex. 1004, code (57), and Ex. 2015 ¶ 273; citing Ex. 2021 ¶ 27).

“A reference qualifies as prior art for an obviousness determination under § 103 only when it is analogous to the claimed invention.” *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011). “Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004).

Based on the current record, we are persuaded that Strub and Woo satisfy both tests. The ’207 patent describes a field of endeavor of synchronizing different recordings of a live performance. *See, e.g.*, Ex. 1001, col. 1, ll. 45–51 (“Embodiments of the present invention generally relate to systems and methods for recording and processing audio received from one or more wireless devices.”). Strub and Woo are from the same field. *See, e.g.*, Ex. 1003, col. 1, ll. 26–31 (“The invention . . . relates to recording an event in which multiple persons participate . . . [and] recording

of the event by multiple participants (i.e., from multiple points of view), often simultaneously.”), col. 52, ll. 18–24 (describing “a recording of a birthday party” involving “the singing of ‘Happy Birthday’”); Ex. 1004, codes (54) (“Time-Keeping System and Method for Synchronizing Independent Recordings of a Live Performance in Post-Recording Editing”), (57) (describing “time code information . . . input to independent sound, film and video recorders at a performance event to create tracks on each recording for re-synchronizing the pictures and sounds in post-performance editing”). We disagree that the field of endeavor is limited to “professional” sound recording as Patent Owner contends. *See* Prelim. Resp. 58; *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1001 (Fed. Cir. 2016) (“The field of endeavor of a patent is not limited to the specific point of novelty, the narrowest possible conception of the field, or the particular focus within a given field.”).

The ’207 patent also addresses problems with synchronization of audio from multiple recording devices using timecodes or timestamps (e.g., in the case of transmission errors for a particular audio track). *See, e.g.*, Ex. 1001, col. 1, l. 52–col. 2, l. 38, col. 4, l. 3–col. 5, l. 10 (“[s]ynchronization is essential to ensure that each performer’s audio is synchronized with all other performers’ audio” and “must maintain a high accuracy for each performer’s timestamps with respect to all other performers’ timestamps”). Strub and Woo are reasonably pertinent to the problem of synchronization. *See, e.g.*, Ex. 1003, col. 63, ll. 41–60 (“[T]he time-stamps of all recording units are adequately synchronized.”), col. 75, ll. 47–51; Ex. 1004, code (57), col. 4, l. 62–col. 5, l. 53 (describing SMPTE timecodes and jam synchronization). And the fact that both references

utilize GPS signals as part of their respective *methods* of synchronization does not undermine the pertinence of the references to the general problem of synchronization of audio from different recording devices. *See* Prelim. Resp. 58–59; *Innovation Toys, LLC v. MGA Entm’t, Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011) (“A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.”).

g) Reasons to Combine

Petitioner argues that it would have been obvious to modify Strub’s recording unit to include “a conventional SMPTE timecode input port for receiving conventional SMPTE-formatted master timecodes from Woo’s master clock,” which “would involve nothing more than combining familiar elements according to known methods to improve Strub’s system and yield predictable results.” Pet. 25, 28–29 (citing Ex. 1002 ¶¶ 107, 112). Petitioner points out various similarities between the Strub and Woo systems and asserts that Woo “provides express motivations to use its synchronization methods in a wireless, multi-recorder system such as Strub’s.” *Id.* at 24–25. In particular, Petitioner contends that

Woo’s master clock (1) provides accurate synchronization across recorders recording a performance, (2) can generate coordinated timecodes at independent sites proximate to recorders, (3) is simple to connect to the recorders, and (4) provides timecode output in a format that is compatible with a standard (SMPTE) used by commercially available equipment.

Id. at 25 (citing Ex. 1004, col. 4, ll. 3–44).

Petitioner further argues that the ’207 patent “sought to solve the problem of matching the timing between multiple recordings produced by

one or more wireless devices” by “generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp the locally recorded audio data.” Pet. 27 (citing, e.g., Ex. 1001, col. 4, ll. 3–26, col. 4, l. 52–col. 5, l. 10). Petitioner asserts that “Strub and Woo recognized and solved that same problem in the same way,” pointing to the references’ disclosures regarding synchronization using GPS time signals. *Id.* at 27–28 (citing, e.g., Ex. 1003, col. 62, l. 26–col. 63, l. 60; Ex. 1004, code (57), col. 4, ll. 13–19, col. 5, ll. 5–10, col. 7, ll. 26–50).

Patent Owner’s arguments in response are largely premised on an alleged failure of Strub and Woo to teach certain claim limitations. *See* Prelim. Resp. 56–57. Patent Owner disputes that a person of ordinary skill in the art would have combined the teachings of Strub and Woo to solve the “dropout problem” because the references do not teach “multi-track recording,” as they “capture single tracks of mixed audio that do not include individual tracks of audio per performer/audio source.” *Id.* at 56. Based on the current record, we disagree with Patent Owner’s assertion that the references do not teach “locally generated audio,” for the reasons explained above. *See supra* Section II.F.5.d.

Similarly, Patent Owner argues that an ordinarily skilled artisan would not have combined Strub and Woo because the approaches followed by the two references “substantially differ from each other and the claimed invention.” Prelim. Resp. 56–57 (quoting Ex. 2015 ¶ 267; citing Ex. 2015 ¶ 270). According to Patent Owner, “Strub discloses a GPS time signal that produces time stamps but does not control another timecode generator and does not produce a time reference signal used to synchronize at least one

device,” and Woo teaches a master clock with a GPS navigation satellite receiver and digital signal processor. *Id.* at 57 (citing Ex. 2015 ¶ 269). Again, based on the current record, we disagree with Patent Owner’s assertion that the references do not teach a “master timecode generator” producing a master time reference signal that controls a local timecode generator, for the reasons explained above. *See supra* Section II.F.5.e. And, although the specific synchronization functionality is different in the references, Strub and Woo are similar in that they both teach receiving a GPS time signal and using it for synchronization. *See* Pet. 27–28.

Finally, Patent Owner argues that “Strub already discloses a solution to post-production editing (i.e., participants share their locally recorded audio after a recorded event),” so “applying the Woo solution in post-production in Strub would have been unnecessary.” Prelim. Resp. 57–58 (quoting Ex. 2015 ¶ 271; citing Ex. 1003, col. 80, ll. 52–58). We disagree on this record. Petitioner provides multiple reasons for why a person of ordinary skill in the art would have found it desirable to modify Strub’s system to use the synchronization method of Woo, including that Woo’s system produces “accurate synchronization across recorders,” generates “coordinated timecodes at independent sites proximate to recorders,” is “simple to connect,” and provides timecodes in a format compatible with commercially available equipment, with supporting testimony from Dr. Kyriakakis. *See* Pet. 25; Ex. 1002 ¶ 107; *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004) (“‘[T]he question is whether there is something in the prior art as a whole to suggest the *desirability*, and thus the obviousness, of making the combination,’ not whether there is something in the prior art as a whole to suggest that the combination is the *most desirable*

combination available.”). Petitioner also explains how Strub and Woo address the same problem of synchronization of audio from multiple recording devices, again with supporting testimony. *See* Pet. 27–28; Ex. 1002 ¶¶ 110–111, 113; *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (“That [two references] address the same problem and that [one reference’s teaching] was a known way to address that problem is precisely the reason that there [is] a motivation to combine under *KSR*”). Petitioner has made a sufficient showing as to the combination of Strub and Woo based on the current record.

As to the further combination with Nagai and Gleissner, Petitioner argues that a person of ordinary skill in the art “would have been motivated to include Nagai’s microphone jack or Gleissner’s microphone plug connection in Strub’s and/or Woo’s local audio device,” for example, because doing so would “allow different kinds of microphones to be easily swapped in and out of [Strub’s] and Woo’s audio recording systems to match the systems to the particular application and environment.” Pet. 25–26, 45.

Patent Owner responds that modifying Strub’s system based on Nagai or Gleissner would change the principle of operation of Strub or render it unsuitable for its intended purpose. Prelim. Resp. 59–61. In particular, Patent Owner argues that Strub’s intended purpose is “low attention, social recording that allows multiple recorders to record the same event from multiple viewpoints.” *Id.* at 60 (citing Ex. 1003, code (57)). Patent Owner argues that Petitioner’s proposed modification of Strub to incorporate Nagai’s audio input port (a mic jack) or Gleissner’s conventional audio input port (an XLR plug connector) “would cause each Strub recorder to record

only the recorder's audio" via the audio input port, "which would result in only one audio recording for any given event despite the number of recorders or possible viewpoints." *Id.* at 60–61.

We disagree with Patent Owner's arguments based on the current record. Strub discloses that its audio device may include an "audio data acquisition device," such as a "lavalier microphone." *See* Pet. 41–42 (citing Ex. 1003, col. 68, l. 63–col. 69, l. 67). Petitioner alleges that an ordinarily skilled artisan would have understood Strub to teach a "microphone [that] is not soldered or hard-wired, but is connected to the local audio device through an audio input port such as a microphone jack and/or plug." *Id.* Petitioner proposes incorporating Nagai's mic jack or Gleissner's XLR plug connector as an "audio input port," to the extent Strub does not teach such a port. *Id.* at 43–45. Thus, the proposed modification does not necessarily change the operation of the audio data acquisition device itself, only its physical connection to the wearable audio device. Patent Owner's argument that the proposed modification would change the manner of recording thus is not commensurate with the scope of Petitioner's proposed combination.

Petitioner has made a sufficient showing as to the combination of Strub and Woo with Nagai and Gleissner based on the current record.

h) Conclusion

Petitioner's contentions regarding the combination of Strub, Woo, Nagai, and Gleissner are supported by the testimony of Dr. Kyriakakis and are persuasive based on the current record. *See* Pet. 24–57; Ex. 1002 ¶¶ 105–115, 117–138, 143–165. Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 17 is unpatentable over

Strub, Woo, Nagai, and Gleissner. Accordingly, we institute review “on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” *See* 37 C.F.R. § 42.108(a).

6. Claims 18, 19, 21–23, 33, 34, 59, 60, and 66

Patent Owner argues independent claims 17 and 59 together and does not argue dependent claims 18, 19, 21–23, 33, 34, 60, and 66 separately. Prelim. Resp. 32–61. On this record, we disagree with Patent Owner’s arguments regarding the independent claims and are persuaded that Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 17 is unpatentable over Strub, Woo, Nagai, and Gleissner. *See supra* Section II.F.5. Accordingly, we need not determine at this time whether Petitioner also has shown a reasonable likelihood of prevailing as to any of the other challenged claims. *See* 37 C.F.R. § 42.108(a).

III. CONCLUSION

Based on the arguments presented in the Petition, we conclude that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one claim of the ’207 patent challenged in the Petition. Accordingly, we institute a trial on all claims and all grounds asserted in the Petition. The Board has not made a final determination under 35 U.S.C. § 318(a) with respect to the patentability of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 17–19, 21–23, 33, 34, 59, 60, and 66 of the '207 patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '207 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

IPR2025-00232
Patent 10,276,207 B1

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Exhibit D

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RØDE MICROPHONES, LLC AND
FREEDMAN ELECTRONICS PTY LTD,
Petitioners

v.

ZAXCOM, INC.,
Patent Owner.

IPR2025-00230

Patent 7,711,443

PETITION FOR INTER PARTES REVIEW

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TABLE OF EXHIBITS

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1001	United States Patent 7,711,443
1002	Declaration of Professor Chris Kyriakakis
1003	United States Patent No. 6,825,875 (“Strub”)
1004	United States Patent No. 5,479,351 (“Woo”)
1005	United States Publication No. 2002/0159179 (“Nagai”)
1006	United States Patent Publication No. 2004/0028241 (“Gleissner”)
1007	[Reserved]
1008	United States Patent No. 7,483,485 (“Winningstad”)
1009	U.S. Patent No. 6,571,211 (“Dwyer”)
1010	[Reserved]
1011	[Reserved]
1012	[Reserved]
1013	[Reserved]
1014	IPR2018-00972 Paper 41 November 7, 2019 Final Written Decision
1015	United States Patent 9,336,307
1016	IPR2018-00972 Petition for Inter Partes Review
1017	IPR2018-01129 Paper 33 January 24, 2020 Final Written Decision

Exhibit No.	Description
1018	IPR2018-01130 Paper 32 January 24, 2020 Final Written Decision
1019	IPR2018-00972 Zaxcom, Inc's Patent Owner Response
1020	IPR2018-01129 Zaxcom, Inc's Patent Owner Response
1021	IPR2018-01130 Zaxcom, Inc's Patent Owner Response
1022	[Reserved]
1023	United States Patent No 489,570
1024	Apple Be Damned: The Humble Headphone Jack Has Survived For More Than A Century by Jonathan Ore. Published September 10, 2016.
1025	IEC 61076-2-103:2004
1026	Wayback Machine Archived Copy of Sanken Catalogue
1027	Wayback Machine archived copy of Sanken Webpage
1028	United States Patent 8,385,814
1029	[Reserved]
1030	United States Patent 7,929,902
1031	November 13, 2024 Doc. 98 Order Revising Schedule in <i>Zaxcom, Inc. v. Rode Microphones, LLC and Freedman Electronics PTY Ltd.</i>
1032	October 28, 2024 Letter from Zaxcom counsel responding to RØDE's request to reduce number of asserted claims
1033	[Reserved]
1034	[Reserved]

Exhibit No.	Description
1035	[Reserved]
1036	United States Patent 7,711,443 Prosecution History Excerpts

MANDATORY NOTICES UNDER 37 C.F.R. §42.8

Pursuant to 37 C.F.R. §42.8, Petitioner states as follows:

A. Real Parties-in-Interest (37 C.F.R. §42.8(b)(1))

The real parties-in-interest are RØDE Microphones, LLC and Freedman Electronics Pty Ltd.

B. Related Matters (37 C.F.R. §42.8(b)(2))**1. U.S. District Court for the District of Delaware**

The following pending district court litigation may affect or be affected by this proceeding: *Zaxcom, Inc. v. RODE Microphones, LLC, et al.*, No. 1:23-cv-01245-JFM (D. Del.), filed October 31, 2023 (“the Delaware Litigation”). Petitioner RØDE Microphones, LLC was served with the original Complaint on December 4, 2023. Petitioner Freedman Electronics Pty Ltd was served with the original Complaint on April 12, 2004. On November 14, 2024, Zaxcom filed an Amended Complaint which alleges, among other things, that Petitioner has infringed certain claims of U.S. Patent No. 7,711,443 (“the ’443 Patent”) and six other patents: U.S. Patent Nos. 7,929,902 (“the ’902 Patent”), 8,385,814 (“the ’814 Patent”), 9,336,307 (“the ’307 Patent”), 10,276,207 (“the ’207 Patent”), 11,610,605 (“the ’605 Patent”), and 12,051,444 (“the ’444 Patent”) (collectively, the “Delaware Patents-in-Suit”). The Delaware Patents-in-Suit are all related to each other through a chain of continuation and continuation-in-part applications.

2. Patent Trial and Appeal Board—Co-Pending Matters

Concurrently with the present Petition, Petitioner is filing *Inter Partes* Review (“IPR”) Petitions challenging the patentability of certain claims of the ’902 and ’207 Patents. Those IPRs may affect indirectly or may be affected indirectly by the decision in this proceeding since all three patents are related and are involved in the Delaware Litigation.

3. Patent Trial and Appeal Board—Past Matters

The related ’902, ’814, and ’307 Patents were previously involved in the following IPRs filed by third party Lectrosonics:

- ’902 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129 (“the ’1129 IPR”);
- ’814 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01130 (“the ’1130 IPR”); and
- ’307 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-00972 (“the ’972 IPR”)

(collectively, “the Lectrosonics IPRs”).

Since the presently challenged claims of the ’443 Patent share many elements with claims of the related ’902, ’814, and ’307 Patents that the PTAB previously found unpatentable in the Lectrosonics IPRs, and since the Lectrosonics IPRs were

based on several of the same prior-art references relied on here, the Lectrosonics IPRs may affect the decision in this proceeding.

C. Lead and Backup Counsel and Service Information (37 C.F.R. §§42.8(b)(3) and (b)(4))

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I. INTRODUCTION

RØDE Microphones, LLC and Freedman Electronics Pty Ltd (collectively “RØDE” or “Petitioner”) requests IPR and cancellation of Claims 1-4, 7-9, 15, 17, 19, 20, and 22-27 (“the Challenged Claims”) of the ’443 Patent (Ex. 1001). IPR of the Challenged Claims should be instituted and the claims found unpatentable.

II. CERTIFICATION OF GROUNDS FOR STANDING UNDER 37 C.F.R. § 42.104(a)

Petitioner certifies that the ’443 Patent is available for IPR and Petitioner is not barred or estopped from requesting IPR of the Challenged Claims.

III. IDENTIFICATION OF RELIEF REQUESTED AND GROUNDS FOR CHALLENGE UNDER 37 C.F.R. §§ 42.22(a)(1) AND 42.104(b)

Petitioner requests review and cancellation of Claims 1-4, 7-9, 15, 17, 19, 20, and 22-27 of the ’443 Patent on the following grounds:

Ground	Claims	Basis	Prior Art
1	1-3, 7, 8, 15, 17, 19, 20, 23-27	35 U.S.C. § 103	U.S. Patent No. 6,825,875 (“Strub”) (Ex. 1003), U.S. Patent No. 5,479,351 (“Woo”) (Ex. 1004), U.S. Patent Pub. No. 2002/0159179 (“Nagai”) (Ex. 1005), U.S. Patent Pub. No. 2004/0028241 (“Gleissner”) (Ex. 1006)

2	4, 9	35 U.S.C. § 103	Strub, Woo, Nagai, Gleissner, and U.S. Patent No. 7,483,485 ("Winningstad") (Ex. 1008)
3	22	35 U.S.C. § 103	Strub, Woo, Nagai, Gleissner, and U.S. Patent No. 6,571,211 ("Dwyer") (Ex. 1009)

For purposes of the district court litigation, Petitioner reserves the right to argue that one or more of the terms in the claims of the '443 Patent are indefinite or require construction. Furthermore, Petitioner's reading of the respective claim terms is based on Zaxcom's reading of those terms in the Delaware Litigation, including Zaxcom's application of the claim terms in its infringement contentions in that litigation.

IV. BACKGROUND OF THE TECHNOLOGY

The '443 Patent describes a system for recording locally generated audio in a wearable local device and wirelessly transmitting the audio to a remote device. Ex. 1001, 1:15-47. The alleged invention is that the local device stores (*i.e.*, records) local audio data, receives a master timecode from a master timecode generator and stamps the stored (recorded) local audio data with a timestamp referencing at least a portion of the local audio data to the master timecode. *Id.* 2:58-61, 3:28-41, 4:13-37, 8:57-9:12, 10:46-50, 12:56-64, 13:28-32, 14:39-42, 15:4-11, 21:51-22:12, Figs. 4A, 4B, 5, 6.

This purported innovation was not new, but existed in the prior art. As non-limiting examples, Strub, Woo, and Winningstad teach local devices which receive a master timecode from a master timecode generator and stamp the recorded audio data with a timestamp referencing at least a portion of the local audio data to the master timecode. *See, e.g.*, Ex. 1003, 62:26-63:50 (“A GPS receiver can also be used to receive a signal representing the current time that can be used as a clock to generate time-stamps for the recording data.”); Ex. 1004, Abstract, 1:60-2:9, 2:39-48, 3:3-24, 4:3-32, 5:5-67 (master timecodes used to “date and time tag[]” recordings), 7:26-50, 8:60-9:4, 9:56-62, 10:15-64, Figs. 1, 3-6; Ex. 1008, 2:30-31, 7:18-21, 8:9-12, 8:17-22 (“GPS date [and] time...information can...be inserted into the audio data....”), 8:33-35, 9:17-18, 9:43-45, 10:58-65, Figs. 5, 6; Ex. 1002, ¶ 39.

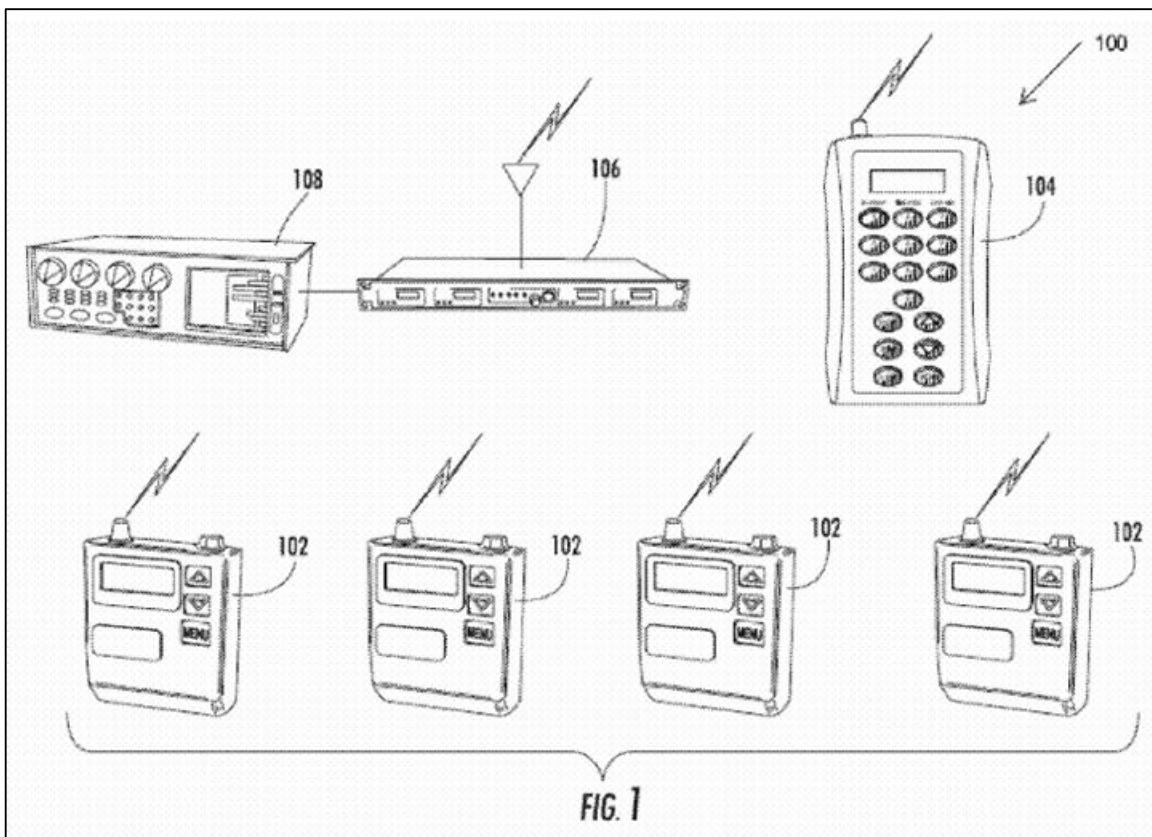
V. PERSON OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSA”) as of the claimed priority date would have had at least a Bachelor’s degree in electrical engineering or a related or equivalent field, and two or more years of experience working with audio systems. However, additional years of education in the above-referenced fields may compensate for fewer years of experience. Ex. 1002, ¶ 40.

VI. THE '443 PATENT

A. Summary of the Specification

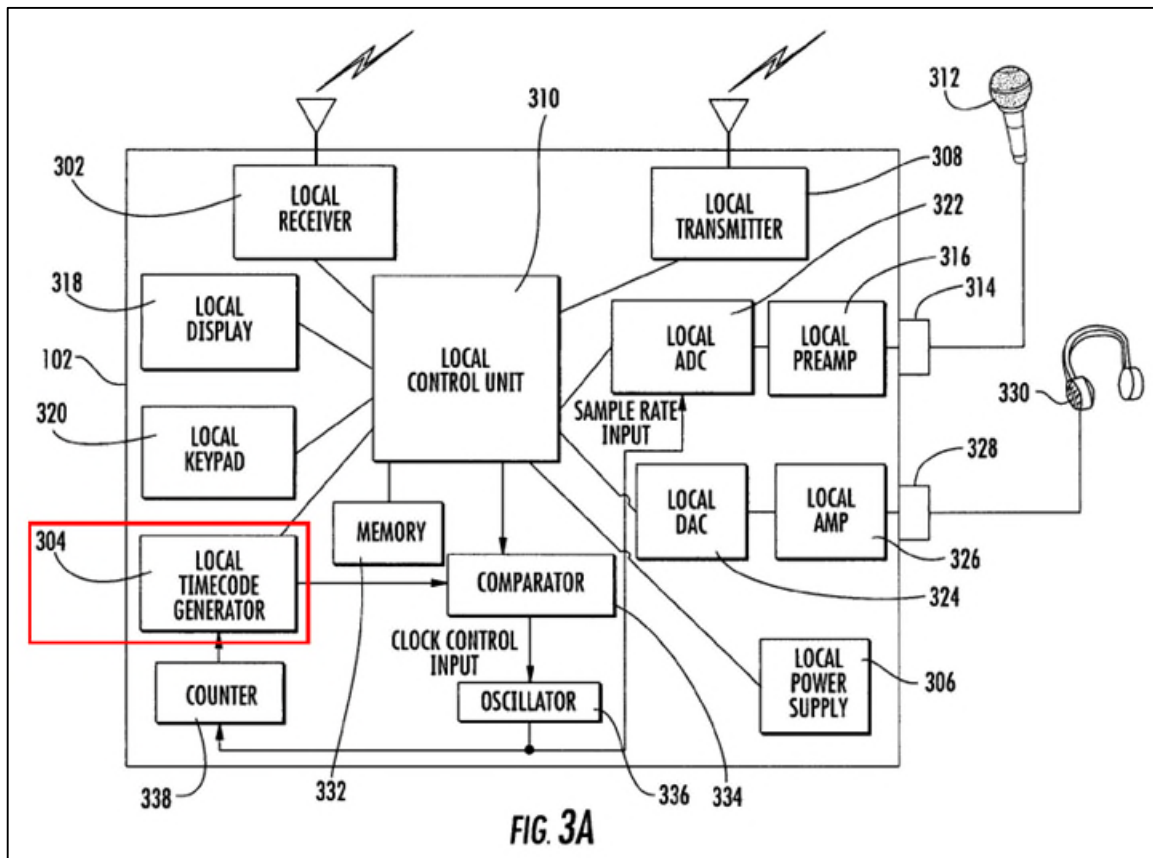
The '443 Patent describes a recording system 100 which wirelessly records audio performances. Ex. 1001, 3:30-32, Fig. 1. The system 100 includes one or more wearable local audio devices 102, a remote receiver 106, a remote recorder 108 connected to the receiver 106, and a remote control unit ("RCU") capable of transmitting a time reference signal, digital commands, and/or audio to the other components, as depicted in Fig. 1:



See Id. 3:55-61, 21:56-57, Fig. 3B. The local audio devices 102 record audio from the performers and transmit audio wirelessly to the remote receiver 106. *Id.* 4:1-7. The audio received by the receiver 106 is recorded by the recorder 108. *Id.* 4:7-10.

The components of the system 100 are synchronized to allow each component to timestamp its recorded audio. *Id.* 3:32-41. The timestamps allow the system to combine individual audio tracks into multi-track audio files, correct for lost audio data, and/or synchronize tracks in post-processing. *Id.* 3:41-54; 4:13-36.

To synchronize its devices, the system can include a master timecode generator, which generates master timecodes and sends them wirelessly to the local audio devices 102. *Id.* 9:38-44, 15:4-6, Fig. 6 (step 604). Each local audio device 102 can also have its own local timecode generator 304, as illustrated in Fig. 3A:



See *id.* 5:25-29, Fig. 3A.

The local audio devices 102 can use the master timecodes to synchronize their local timecode generators 304 and/or timestamp the locally recorded audio. *Id.* 2:58-61, 3:32-41, 4:13-37, 5:25-31 (“This master time reference signal provides a time reference for all local audio devices 102, which may use this information for...synchronizing their respective local timecode generators 304..., timestamping locally recorded audio, etc.”), 8:65-9:12, 12:56-64, 13:28-32, 14:38-41, 15:4-16, Figs. 3A, 4A, 4B, 5, 6; *see also* Ex. 1002, ¶ 50.

B. Claims

The '443 Patent has 28 claims, of which Claims 1-4, 7-9, 15, 17, 19, 20, and 22-27 are challenged in this Petition. Claim 1 is independent. Each Challenged Claim refers to a wearable, local audio device which receives master timecodes, receives locally generated audio, creates local audio data from the locally generated audio, stores the audio in a memory, and wirelessly transmits the audio in real time, wherein the local audio data includes stamped and unstamped local audio data, the stamped data includes at least one timestamp to reference at least a portion of the local audio data to at least one of the master timecodes, and the unstamped data does not include a reference to the master timecodes. See Ex. 1001, Claim 1. The '443 Patent acknowledges that all or most of those features were known in the prior art, since they are described in the patent's Background section. *Id.* 1:15-17 (“**recording**...audio received from...**wireless devices**”), 1:29-34 (“[T]he...audio is **timestamped with a time reference signal**...”), 1:38-45 (audio recorder and receiver “**receive audio wirelessly from one or more wireless transmitters**[, which are] **body packs that are worn by each performer**...”).

Several of the challenged dependent claims add features that are part of the admitted prior art in the Background section of the '443 Patent:¹

Claim(s)	Feature	Location in '443 Background
7	at least one of the group consisting of a recorder, a receiver, and combinations thereof, said at least one of the group consisting of said recorder, said receiver, and combinations thereof coupled wirelessly to said at least one local audio device;	1:15-17 (“recording and processing audio received from one or more wireless devices”); 1:38-42 (“[A] multi-track audio recorder and an associated audio receiver...receive audio wirelessly from one or more wireless transmitters,[which] may take the form of body packs that are worn by each performer.”)
7	wherein said at least one local audio device transmits said local audio data to said at least one of the group consisting of said recorder, said receiver, and combinations thereof wirelessly via said at least one local audio device wireless transmitter.	<i>Id.</i>

¹ See *Nichia Corp. v. Emcore Corp.*, Case IPR2012-00005, Paper 68 at 20 (P.T.A.B. Feb. 11, 2014) (“The Admitted Prior Art includes the background section...of the...patent....”); *In re Metz*, 173 F.3d 433, at *1 (Fed. Cir. 1998) (“The admitted prior art apparatus is set forth...in the ‘Background of the Invention’ section of the patent.”); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1303 (Fed. Cir. 2016); *In re Battiston*, 139 Fed.Appx. 281, 282 (Fed. Cir. 2005).

15	said local audio data is combined electronically to create a single multi-track data file.	1:23-29 (“Some [prior-art] systems include a multi-track audio recorder wired to one or more microphones. [Performances] are recorded by...microphones that are directly wired to the multi-track recorder[, which] combines the single track of audio received from each microphone to create one multi-track audio file.”)
19	said at least one local audio device is a body pack.	1:40-43 (“[Prior-art] wireless transmitters may take the form of body packs that are worn by each performer.”)
24	said at least one local audio device transmits said local audio data in digital form.	1:42-45 (“[T]he audio receiver receives each performer's audio from the performer's respective body pack via an analog or digital wireless transmission and transmits it to the audio recorder.”)

C. Lectrosonics IPRs

1. Collateral Estoppel Based on PTAB’s Findings Regarding Claim Elements in Prior Art and Obviousness of Combinations

In the Lectrosonics IPRs, the PTAB made numerous findings regarding the presence of claim elements in Strub, Woo, Nagai, and Gleissner, and regarding the obviousness of combining those references. Zaxcom is collaterally estopped from disputing those findings.

Collateral estoppel, a/k/a issue preclusion, precludes a party from relitigating an issue if: “(1) the issue is identical to one decided in the first action; (2) the issue

was actually litigated in the first action; (3) resolution of the issue was essential to a final judgment in the first action; and (4) [the party against whom collateral estoppel is being asserted] had a full and fair opportunity to litigate the issue in the first action.” *Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1381 (Fed. Cir. 2022). “It is well established that collateral estoppel applies to IPR proceedings.” *Id.* Furthermore, “[i]t is well established that patent claims need not be identical for collateral estoppel to apply [provided] that the *issues of patentability* [are] identical....[C]ollateral estoppel may apply even if the patent claims ‘use slightly different language to describe substantially the same invention,’ so long as ‘the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity.’” *Google v. Hammond*, 54 F.4th at 1381; *see also Google LLC v. Parus Holdings, Inc.*, IPR2022-00279, Paper 16 at 17-21 (P.T.A.B. Sept. 18, 2023) (collateral estoppel where non-identical claim limitations were sufficiently similar that the *issues* were identical); *Papst*, 924 F.3d at 1250-53 (Fed. Cir. 2019) (issue preclusion based on prior PTAB decision); *see also United States v. Utah Constr. & Mining Co.*, 384 U.S. 394, 421-22 (1966) (collateral estoppel can arise from an administrative decision).

In the ’972 IPR, the PTAB found Claims 12-14 of the ’307 Patent anticipated by Strub. Ex. 1014 at 25-26. In doing so, the Board necessarily found all elements of those claims present in Strub, including the following:

- locally receiving local audio generated by at least one performer during an audio event;
- locally recording the local audio as local audio data in at least one memory of at least one local audio device wearable by a creator of said local audio;
- locally receiving or generating master time data including at least one of the group consisting of hour data, minute data, second data, and combinations thereof;
- wirelessly transmitting the locally generated audio to a remote recorder; and
- remotely recording the locally generated audio by the remote recorder as remotely recorded audio data.

See Ex. 1015 Claims 12-14; *see also* Ex. 1014 at 21 (finding that Strub discloses “a local audio device that records local audio and transmits the local audio to other remote devices” and “that the same local audio is stored at both the wearable local audio device as local audio data and the remote receiver/recorder as remotely recorded audio data”), 22 (“Strub’s device is ‘wearable.’”);

The PTAB found Claim 1 of the ’307 Patent obvious over Strub combined with Nagai or Gleissner, Ex. 1014 at 19, 25, thus necessarily finding that Strub, Nagai and/or Gleissner teach “at least one audio input port for receiving said locally

generated audio from an audio input device,” and that it would have been obvious to combine Strub with Nagai or Gleissner. *Id.* 16-19.

In the ’1129 and ’1130 IPRs, the Board made similar findings regarding (1) the presence of the above-referenced limitations in Strub, Nagai, and Gleissner, and (2) the obviousness of combining those three references. *See, e.g.*, Ex. 1017 at 25 (finding Strub’s device “wearable by a creator of said locally generated audio”), 35 (finding ’902 Claims 7, 8, and 11 obvious over Strub, Nagai or Gleissner, and Woo), 41 (Strub teaches a local audio device that records and transmits local audio), 41 (’902 Claims 12, 14, and 15 anticipated by Strub); Ex. 1018 at 21-22 (Strub’s device “wearable by a creator of said locally generated audio”), 32 (finding numerous ’902 Claims obvious over Strub, Nagai or Gleissner, and Woo). The Board also found that Strub discloses “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory,” that Woo discloses a “master timecode generator for generating a plurality of timecodes,” and that a POSA would have been motivated to combine Strub and Woo. Ex. 1017 at 25-31; Ex. 1018 at 22-28.

In the ’1130 IPR, Lectrosonics’s grounds for unpatentability against Claim 45 of the ’814 Patent included, among others, obviousness based on the combination of Strub, Woo, Dwyer, and Nagai or Gleissner. Ex. 1018 at 6, 32, 63. Lectrosonics

relied on Dwyer to teach “storing a timestamped audio information in an audio file, and including timestamp information in the file’s header information.” *Id.* 33. The Board found Claim 45 of the ’814 Patent unpatentable over the combination of Strub, Woo, Dwyer, and Nagai or Gleissner. Ex. 1018 at 33, 63. In doing so, the Board necessarily found that: (1) Dwyer discloses storing timestamped audio information in an audio file, and including timestamp information in the file’s header information; and (2) a POSA would have considered it obvious to combine Strub, Woo, Dwyer, and Nagai or Gleissner. *Id.*

Zaxcom appealed the Board’s decisions in all three Lectrosonics IPRs. The Federal Circuit affirmed each decision in its entirety. *Zaxcom, Inc. v. Lectrosonics, Inc.*, Nos. 2020-1350, 2020-1405, 2022 WL 499843, at *1-2 (Fed. Cir. Feb. 18, 2022); *Zaxcom, Inc. v. Lectrosonics, Inc.*, Nos. 2020-1921, 2020-1922, 2020-1943, 2020-1944, 2022 WL 499848, at *1-2 (Fed. Cir. Feb. 18, 2022).

Zaxcom is estopped from disputing (1) the presence in the cited references of any of the above-listed limitations—or any materially identical limitations, or (2) the obviousness of combining Strub, Woo, Nagai, and Gleissner, because: the issues are identical to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the Lectrosonics IPRs; and Zaxcom had a full and fair opportunity to litigate the issue in the Lectrosonics IPRs. *See Google v. Hammond*, 54 F.4th at 1381.

2. **Collateral Estoppel Based on PTAB's Findings Regarding Zaxcom's Purported Objective Indicia of Nonobviousness**

In the Lectrosonics IPRs, Zaxcom propounded evidence purporting to show objective indicia of nonobviousness, including: testimony alleging a long-felt need for repairing dropouts; testimony alleging failure of others to implement dropout repair; alleged industry praise in the form of witness testimony, an Emmy award, and an Academy Award for Technical Achievement; and expert testimony attempting to connect the objective-indicia evidence to the challenged claims. *See* Ex. 1019 at 52-59; Ex. 1020 at 54-66; 1021 at 34-59. But the PTAB found that all of Zaxcom's purported objective indicia related to replacing remotely recorded audio data with local audio data—"dropout repair"—and had no nexus with claims lacking that feature. *See* Ex.1014 at 23-25; Ex. 1017 at 31-35; Ex. 1018 at 28-31. Here, none of the Challenged Claims include dropout repair or replacing remotely recorded audio data with local audio data. Thus, they also have no nexus with Zaxcom's purported objective indicia of nonobviousness.

Zaxcom is estopped from relying on the same or substantially similar objective indicia of obviousness in the present case, because: the issues are identical to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the Lectrosonics IPRs;

and Zaxcom had a full and fair opportunity to litigate the issue in the Lectrosonics IPRs. *See Google v. Hammond*, 54 F.4th at 1381.

VII. CLAIM CONSTRUCTION

Petitioner does not currently seek construction of any terms.

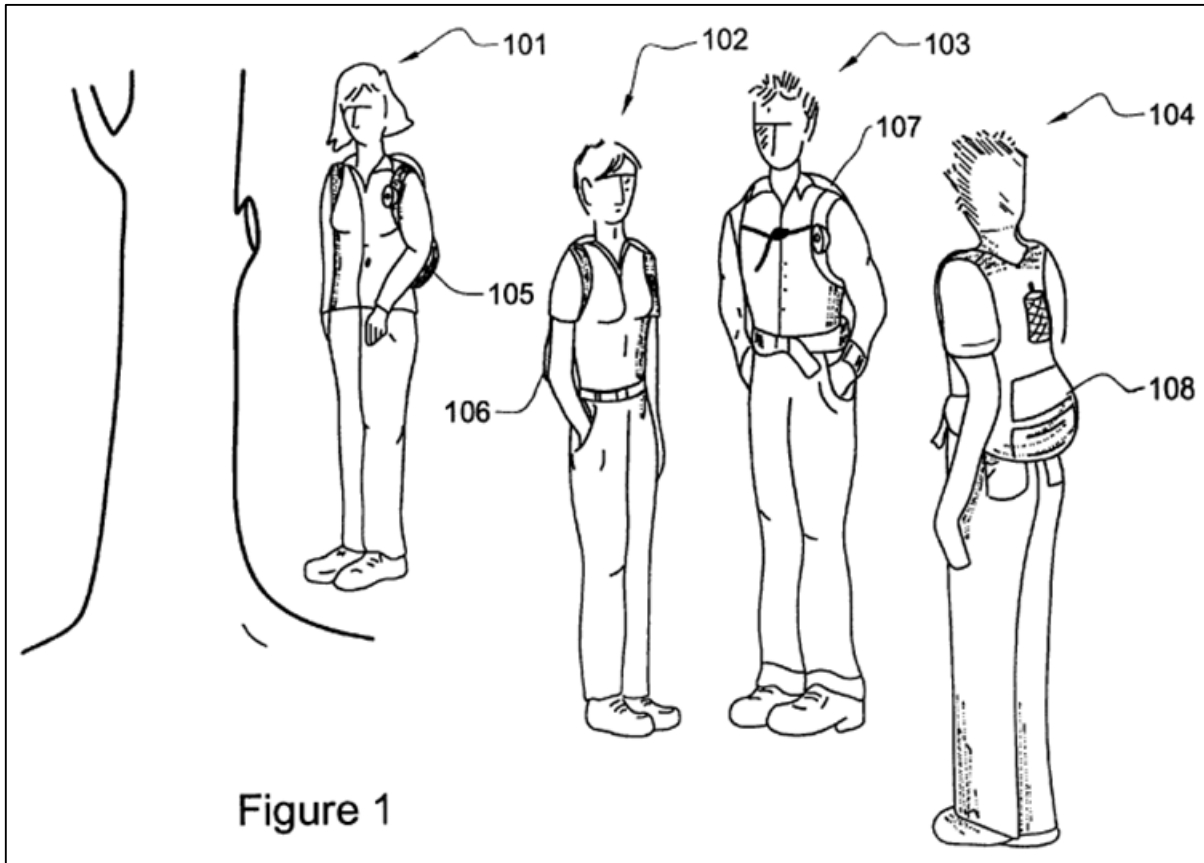
VIII. OVERVIEW OF THE PRIOR ART

Petitioner asserts three grounds for invalidity based on the following six prior art references:

A. Strub

Strub is prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (e). It discloses a plurality of wearable, audio/video recording units, each storing locally generated audio/video and wirelessly transmitting the audio/video to one or more of the other wearable devices. *See, e.g.*, Ex. 1003, 4:28-30 (“wearable recording unit”), 8:7-19, 8:50-53 (recording units “obtain audio data representing an aural record of the event”), 12:13–21, 12:31–39 (“The transmitter 309 transmits signals...representing recording data [to] other recording units...”), 14:59-15:11 (wearable), 21:65-22:7, 35:54–65, 37:11–40, Figs. 1, 4, 6, 8A-9B.

Figure 1 illustrates examples of Strub’s audio/video recording units 105-108:



See also *id.* 8:7-14, 67:30-53, Figs. 4, 6, 8A-9B.

Strub discloses a master timecode generator—*e.g.*, a GPS satellite or SMPTE timecode source. *Id.* 62:26-63:50 (receiving “current time that can be used as a clock to generate time-stamps” from a GPS or satellite services), 75:25-57 (“SMPTE time code input”); see also *id.* 63:50-60.

Strub was not considered in the prosecution of the ’443 Patent. However, Strub was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over Strub alone and over the combination of Strub with Woo, Nagai, and/or Gleissner. *Supra* § VI.C.

B. Woo

Woo is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a system in which one or more recorders 14 and 16 record locally generated audio and transmit it to a remote device—editing station 34—which creates its own recording of the audio. *See* Ex. 1004, 5:3-5 (“A recorder 14 captures [a] performance...while another recorder 16 independently captures the same performance....”), 5:37-49 (“communication of the respective recordings...to the editing station 34”), 8:32-44, 9:40-43, 9:56-62, Figs. 1, 4. Fig. 1 depicts Woo’s system:

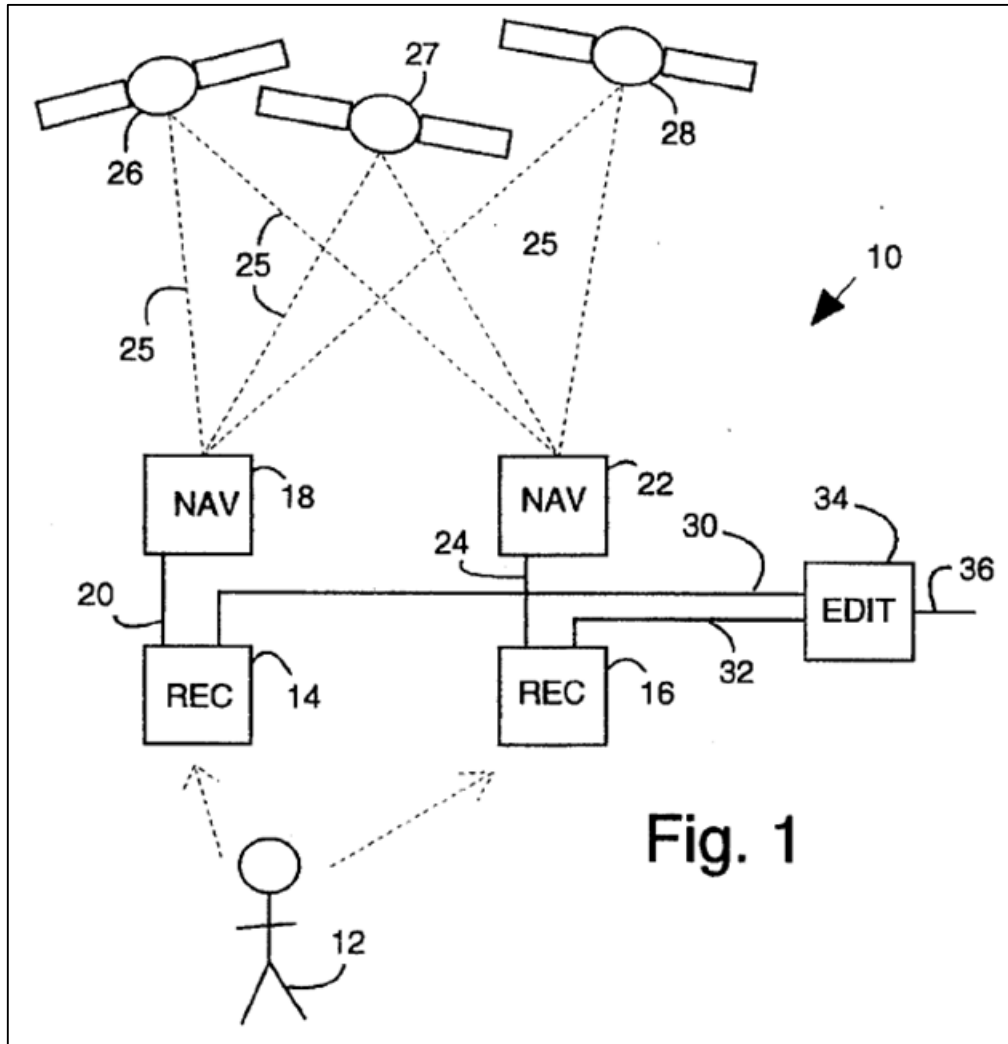
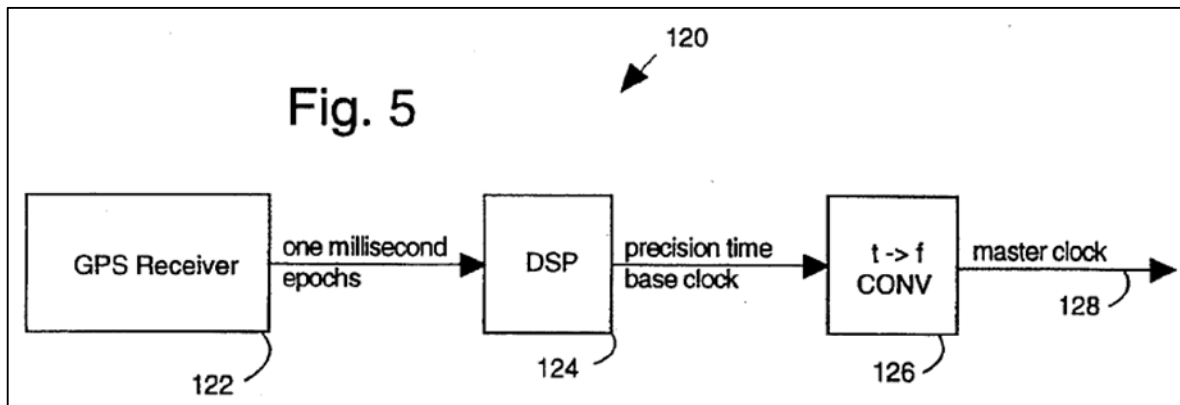


Fig. 1

Each of Woo's local audio devices includes a local timecode generator and a GPS-based master timecode generator. *Id.* Abstract ("A GPS receiver comprises a data output port for communicating time code information...."), 7:26-50, 8:60-9:4, Figs. 1, 3, 5, 6. Fig. 5 illustrates using GPS signals to provide master timecodes—master clock output 128:

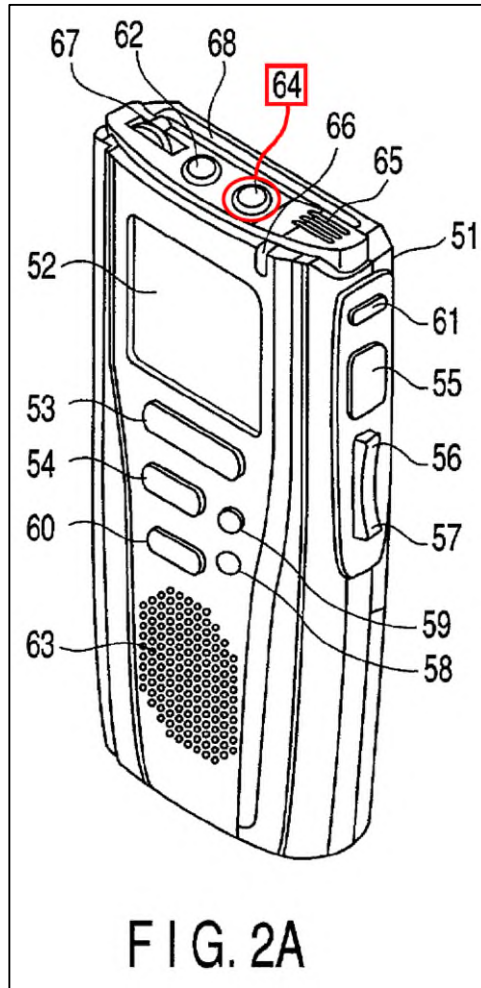


See also Ex. 1002, ¶ 83.

Woo was not considered in the prosecution of the '443 Patent. However, Woo was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over the combination of Strub, Woo, Nagai, and/or Gleissner.

C. Nagai

Nagai is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It describes a voice recording apparatus with a memory card 117 for storing voice data. Ex. 1005, Abstract, [0105]-[0106], [0115], Figs. 1, 4. Nagai's voice recorder has an audio input port—mike [sic] jack 2 or 64—configured to couple to an audio input device—*e.g.*, an external microphone—to receive locally generated voice signals. *Id.*, [0100], [0109]-[0110], [0139], Fig. 1, 2A. Nagai's audio input port—"mike [sic] jack" 64—is illustrated in Fig. 2A (annotated below):



Nagai's voice recorder also has a gain adjustment circuit—volume-control wheel 67 and accompanying circuitry 25—which adjust the volume of the headphone or speaker and sets the "attenuation value" for recording:

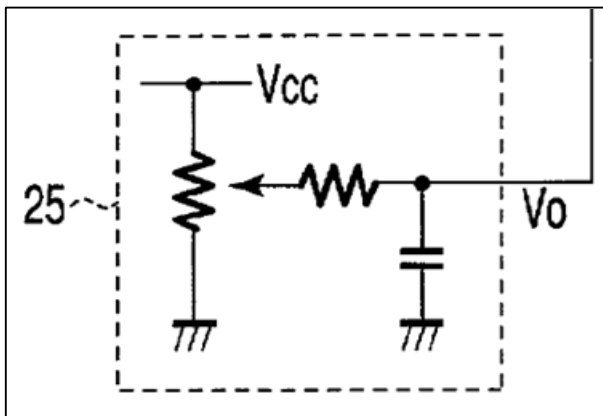


Fig. 1 (excerpted)

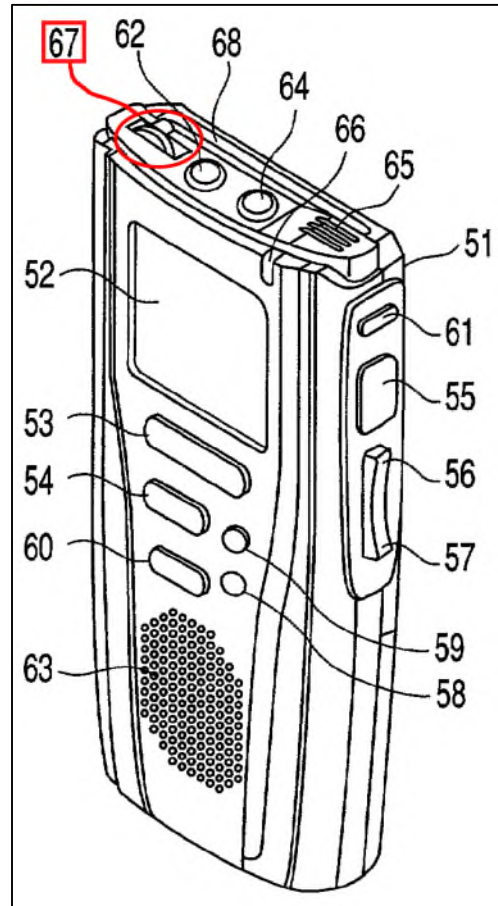


Fig. 2A (annotated)

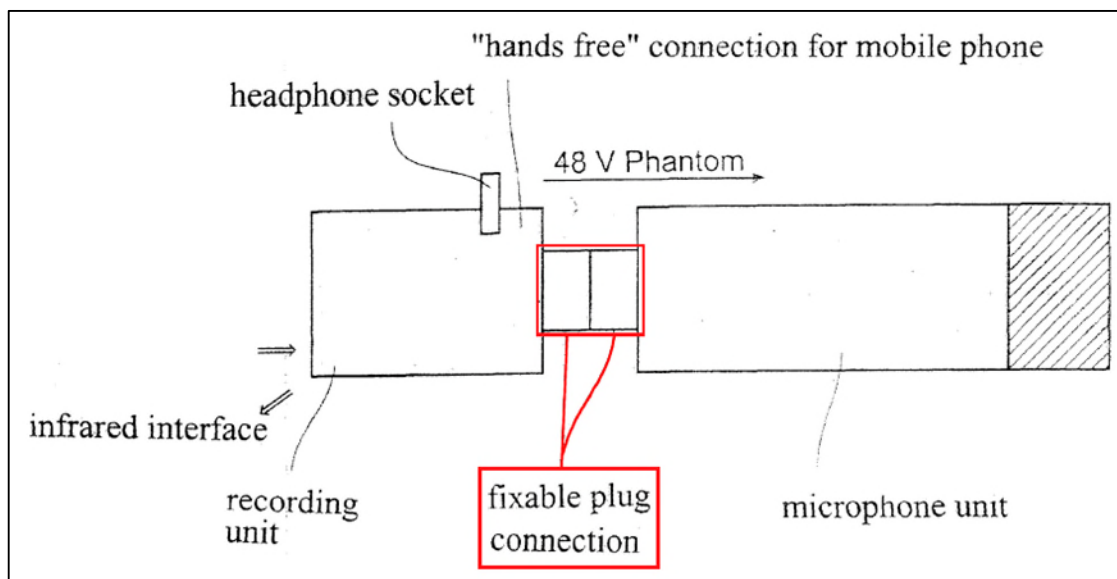
See also *id.* [0033]-[0036] (“reproduction level control means”), [0141]-[0143], [0261]-[0274] (wheel 67 and control circuit 25 set “attenuation value”), [0278]-[0279], [0285], [0321] (reproduction level “used in both the recorder and player modes”), Claims 11-15, Figs. 3, 21; Ex. 1002, ¶ 88.

Nagai was not considered in the prosecution of the ’443 Patent. However, Nagai was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over the combination of Strub

with Nagai or Gleissner and over the combination of Strub with Woo and Nagai or Gleissner.

D. Gleissner

Gleissner is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a portable audio data recorder which stores locally generated audio in a memory. Ex. 1006, Abstract, [0025], [0031]. Gleissner's audio data recorder has an audio input port—an XLR plug connector—to couple to an audio input device—a microphone—to receive locally generated audio. *Id.* [0013] (“XLR plug connection...between the recording unit and the microphone unit”), [0024], [0032]. Gleissner's audio input port—the XLR plug connector—is depicted in Fig. 1:



Id. Fig. 1 (annotated); see also Ex. 1002, ¶ 92.

Gleissner was not considered in the prosecution of the '443 Patent. However, Gleissner was before the PTAB in the Lectrosonics IPRs, in which the Board found

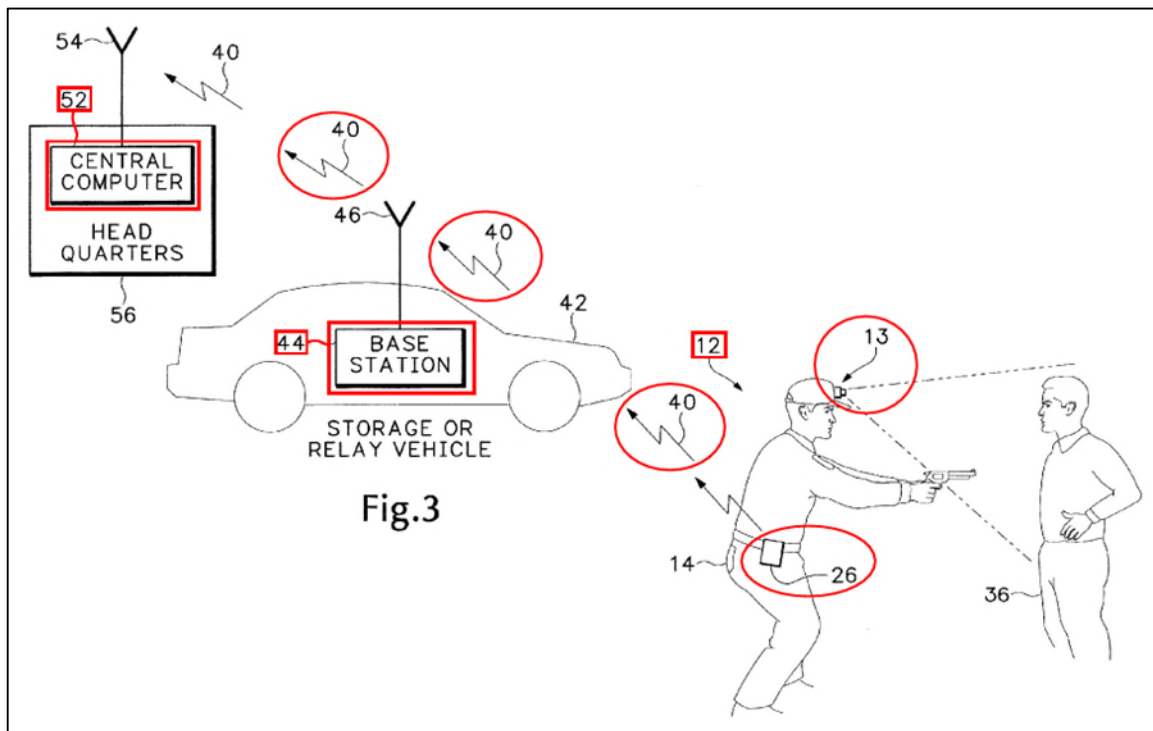
claims similar to the Challenged Claims unpatentable over the combination of Strub with Nagai or Gleissner and over the combination of Strub with Woo and Nagai or Gleissner.

E. Winningstad

Winningstad is prior art under at least pre-AIA 35 U.S.C. § 102(e). It discloses a wearable audio device for storing locally generated audio and video and transmitting the locally generated audio/video to a remote receiver/recorder. Ex. 1008, Abstract (“system includes...a microphone carried by an operator for capturing...audio events....A wireless transmitter wirelessly transmits digital signals containing...the audio events detected by the microphone.”). The audio is received and recorded in a data acquisition and recording (“DAR”) system 12 comprising a hat-mounted device 13 and a data display and report submission (“DD”) device 26 which is worn on the user’s body. *Id.* 2:44-48, 3:4-6 (“[A]udio signals wirelessly received by DD device 26 are digitally stored into a memory device, such as a Flash memory.”), 4:25-28 (“The DD device 26 can be worn in a shirt pocket 28 or in a pant pocket of operator 14, [or] in a vest or other carrying device.”), 5:65-67, 6:58-65, Figs. 1-5.

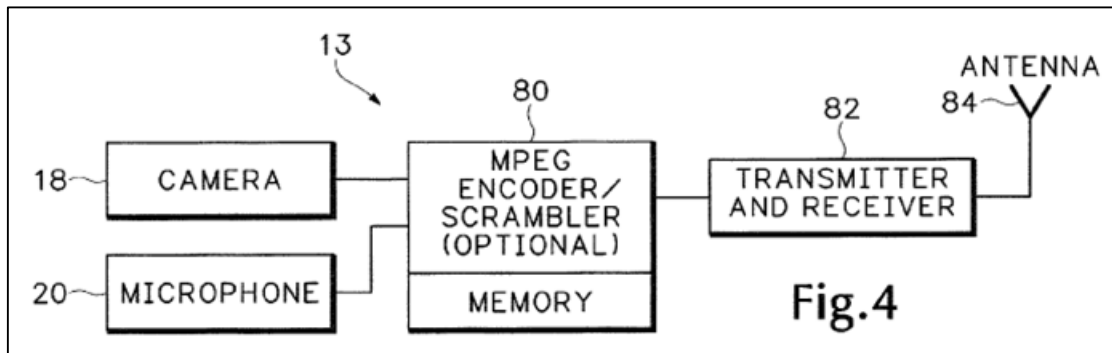
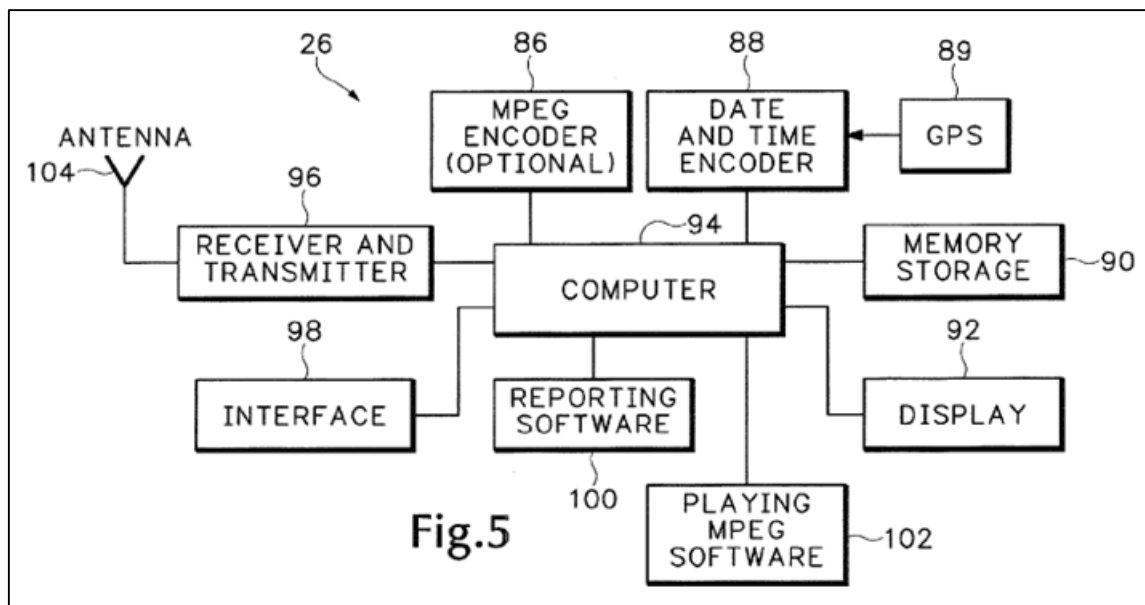
Winningstad’s local device wirelessly transmits the audio to a remote device—*e.g.*, a base station 44 in a police officer’s car, or a central computer 52 at headquarters—to be recorded remotely. *Id.* 4:63-5:4 (“[T]he video and/or audio

data...may be wirelessly relayed to a base station or relay station 44...in an operator vehicle 42.”), 5:21-25 (“The central computer 52...at headquarters...is equipped with a receiver and transmitter that receive the relayed video and audio signals 40 from base station 44 or receive video and audio signals 40 directly from the DD device 26.”), Fig. 3-5. The transmission of audio and video signals 40 from hat-mounted device 13 and/or DD device 26 to base station 44 and/or headquarters central computer 52 is illustrated in Fig. 3 (annotated below):



Base station 44 and central computer 52 both remotely record the local audio data. *Id.* 5:9-14 (“[B]ase station 44...automatically save[s] all of the audio and video information obtained by DAR system 12.”), 5:36-38 (“The information 40 received by central computer 52 may then be stored....”), Fig. 3.

The internal components of Winningstad's hat-mounted device 13 and DD device 26 are depicted in Figures 4 and 5, respectively:

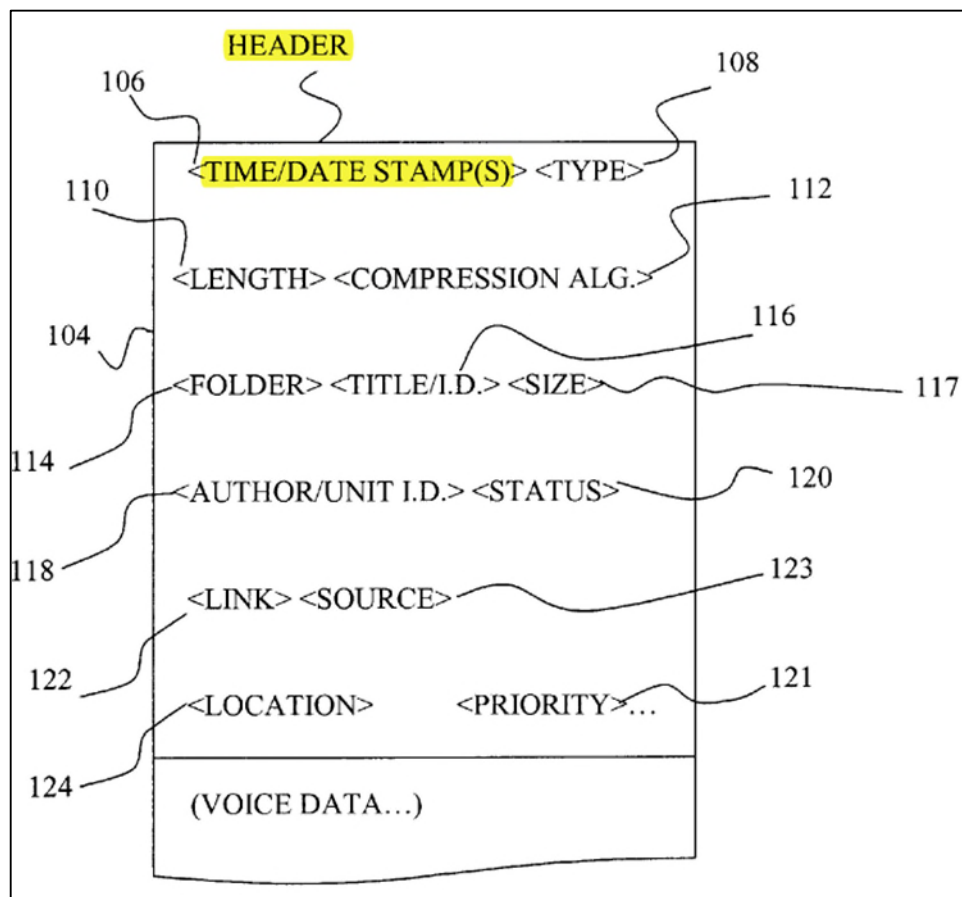


Winningstad's DD device 26 has a GPS receiver 89 which wirelessly receives timing information from a master timecode generator—a GPS satellite. *Id.* 8:17-18, Fig. 5; see also Ex. 1002, ¶ 99.

Winningstad was not considered in the prosecution of the '443 Patent or in the Lectrosonics IPRs.

F. Dwyer

Dwyer is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a portable digital audio recorder 12 having a memory 64 in which a digital audio (voice) file is stored. Ex. 1009, Title, Abstract, 1:11-13, 1:35-44, 4:51-55, Fig. 3. The audio file has a header 104 which includes, *e.g.*, “time and date stamps 106 (corresponding to a time or times at which the voice file was originally recorded...).” *Id.* 6:33-38. The header 104 is depicted in Fig. 5:



Id. Fig. 5 (annotated); see also *id.* 1:45-57, 2:20-40.

Dwyer was not considered in the prosecution of the '443 Patent. However, Dwyer was before the PTAB in one of the Lectrosonics IPRs—specifically the '1130 IPR, in which the Board found Claim 45 of the '814 Patent unpatentable over the combination of Strub, Woo, Dwyer, and Nagai or Gleissner. Ex. 1018 at 33, 63. '814 Claim 45, like Challenged Claim 22, refers to storing timestamped local audio data as an audio file in the memory of a local audio device, and including the timestamp information in the file's header information. Ex. 1028 Claims 1, 45.

IX. SPECIFIC GROUNDS FOR INVALIDITY

A. Ground 1: Claims 1-3, 7, 8, 15, 17, 19, 20, 23-27 are Rendered Obvious Under § 103 By the Combination of Strub, Woo, Nagai, and Gleissner

1. A POSA Would have Been Motivated to Combine Strub, Woo, Nagai, and Gleissner

In the Lectrosonics IPRs, the PTAB found that a POSA would have motivated to combine Strub, Woo, Nagai, and Gleissner, and that the combination(s) would have been obvious. *See supra* VI.C. Zaxcom is collaterally estopped from disputing those findings. *Id.*

Moreover, the teachings of Strub, Woo, Nagai, and Gleissner provide substantial motivation to combine them. For example, the systems in Strub and Woo are the same type of apparatus for the same purpose. Each is for receiving and recording local audio in a local device, wirelessly transmitting the same audio to a remote device, and recording the audio in the remote device. *See, e.g.*, Ex. 1003,

8:50-53, 12:13–21, 12:31–39, 21:65-22:7, 35:54–65, 37:11–40, Figs. 1, 4, 6, 8A-9B; Ex. 1004, 5:3-5, 5:37-49, Fig. 1. In addition, Strub’s and Woo’s local audio devices wirelessly receive master timecodes from a master timecode generator and use the timing information from the master timecodes to stamp the local audio. *See, e.g.*, 1003, 13:50-58, 63:50-60, 79:54-80:9; Ex. 1004, Abstract, 1:60-2:9, 2:39-48, 3:3-24, 3:37-67, 4:3-32, 4:62-64, 5:37-45, 7:26-50, 8:32-44, 8:60-9:4, 9:40-43, 9:56-62, Figs. 3-6.

Woo itself provides express motivations to use its synchronization methods in a wireless, multi-recorder system such as Strub’s. For example, Woo’s master clock (1) provides accurate synchronization across recorders, (2) can generate coordinated timecodes at independent sites, (3) is simple to connect to the recorders, and (4) provides standardized, SMPTE-compatible timecodes. Ex. 1004, 4:3-44; *see also* Ex. 1017 at 29. In addition, modifying Strub’s recording unit to use conventional SMPTE-formatted timecodes from Woo’s master clock would involve merely combining familiar elements according to known methods to improve Strub’s system and yield predictable results. Ex. 1002, ¶ 107.

Nagai and Gleissner teach audio recording systems having an audio input port—a “mike jack” or XLR plug connector—configured to couple to an audio input device for receiving locally generated audio. Ex. 1005, [0100], [0109]-[0110], [0139], Fig. 1, 2A; Ex. 1006, [0013], [0024], [0032], Fig. 1. Audio plugs and jacks

such as those in Nagai have existed for over 130 years and have not changed substantially since the 19th century. See, e.g., Ex. 1023 ; Ex. 1024. XLR connectors such as those referenced in Gleissner were so common as of the priority date of the '443 Patent that they had been standardized. Ex. 1025 at 1 (standard date March 2004), *passim* (copyright year 2004). A POSA would have considered it obvious to use those well-known standard connectors in Strub's local audio device because of their popularity, especially since Strub recommends specific brands of commercially available microphone—*e.g.*, a Sanken CSS-5—which were configured to be plugged into an input port. Ex. 1003, 25:35-49. The Sanken CSS-5, for example, plugged into a standard XLR jack as described in Gleissner. Ex. 1026 at 6, 14 (CSS-5 uses XLR-5 “IN/OUT” connection), *passim* (other XLR-connected microphones); Ex. 1027 , at 7 (CSS-5 uses XLR-5 “IN/OUT” connection), *passim* (other XLR-connected microphones); Ex. 1002, ¶ 108.

Moreover, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007). Motivation to combine is particularly strong where “there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions.” *Id.* 421. This is especially true where the cited references teach (1) “all the limitations of [the challenged] claims,” and (2) the same

“known problem” addressed by the challenged patent. *Ball Aerosol and Specialty Container, Inc. v. Ltd. Brands, Inc.*, 555 F.3d 984, 993 (Fed. Cir. 2009).

The '443 Patent sought to solve the problem of matching the timing between multiple recordings produced by one or more wireless devices. Ex. 1001, 1:15-47. It solved that problem by generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp the locally recorded audio data. *Id.* 2:58-61, 3:32-54, 4:13-37, 5:25-31, 8:65-9:12, 9:38-44, 12:56-64, 13:28-32, 14:38-41, 15:4-16, Figs. 3A, 4A, 4B, 5, 6. Strub and Woo recognized and solved that same problem in the same way. *See* Ex. 1003, 13:50-58 (“clock that is used to time-stamp the recording data obtained by the recording unit.”), 62:26-63:50, 63:50-60, 75:25-57, 79:54-80:9; Ex. 1004, Abstract, 1:60-2:9, 2:39-48, 3:3-24, 3:37-67 (synchronizing local timecode generator to a master timecode generator), 4:13-19, 5:5-10 (satellite receivers provide date and time information to recorder 14), 5:21-29, 5:37-45 (recordings are “date and time tagged”), 7:26-50, 8:60-9:4, 9:33-39, 9:45-55, 10:15-11:1, Figs. 1, 3-6; *see also* 1002, ¶ 111.

In addition, “when a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 550 U.S. at 417. Every element of Challenged Claims 1-3, 7, 8, 15, 17, 19, 20,

23-27 appears in Strub, Woo, Nagai, and/or Gleissner. *See infra* § IX.A.2. Those elements are standard method steps using well-known, off-the-shelf audio-recording and radio components that would be familiar to any POSA. Ex. 1002, ¶ 112. There is nothing unpredictable about the claimed use of those components in a wireless audio-recording system. *Id.*; *see KSR*, 550 U.S. at 417 (improvement should be “more than the predictable use of prior art elements according to their established functions.”). Furthermore, the technology and operation of such components was well-understood in the relevant time period such that the combination of Strub, Woo, Nagai, and Gleissner would have had a high likelihood of success. Ex. 1002, ¶ 112.

Thus, since Strub and Woo teach the same kind of device used for the same purpose, since they identified the same problem identified in the '443 Patent and solved it in the same way, since the microphone jacks and plugs of Nagai and Gleissner were old elements performing the same function they had always been known to perform, since audio input ports have been known for over a century, since the combination of elements in the Challenged Claims is merely “the predictable use of prior art elements according to their established functions,” and since the combination of Strub, Woo, Nagai, and Gleissner would have had a high likelihood of success, a POSA would have been motivated to combine Strub, Woo, Nagai, and Gleissner.

2. **The Combination of Strub, Woo, Nagai, and Gleissner Meets All Elements of Challenged Claims 1-3, 7, 8, 15, 17, 19, 20, 23-27**

As discussed below, the Preambles and every element of Claims 1-3, 7, 8, 15, 17, 19, 20, 23-27 are taught by Strub, Woo, Nagai, and/or Gleissner. To the extent Patent Owner alleges that any of Strub, Woo, Nagai, and Gleissner fails to teach any claim element, that element is provided by the other references. Further, to the extent the teachings of any of Strub, Woo, Nagai, and/or Gleissner are substantively different for any given claim element, it would have been at least obvious to try the other references' implementation of that element, given the overall similarity in their purpose, design and operation.

a. **Claim 1.**

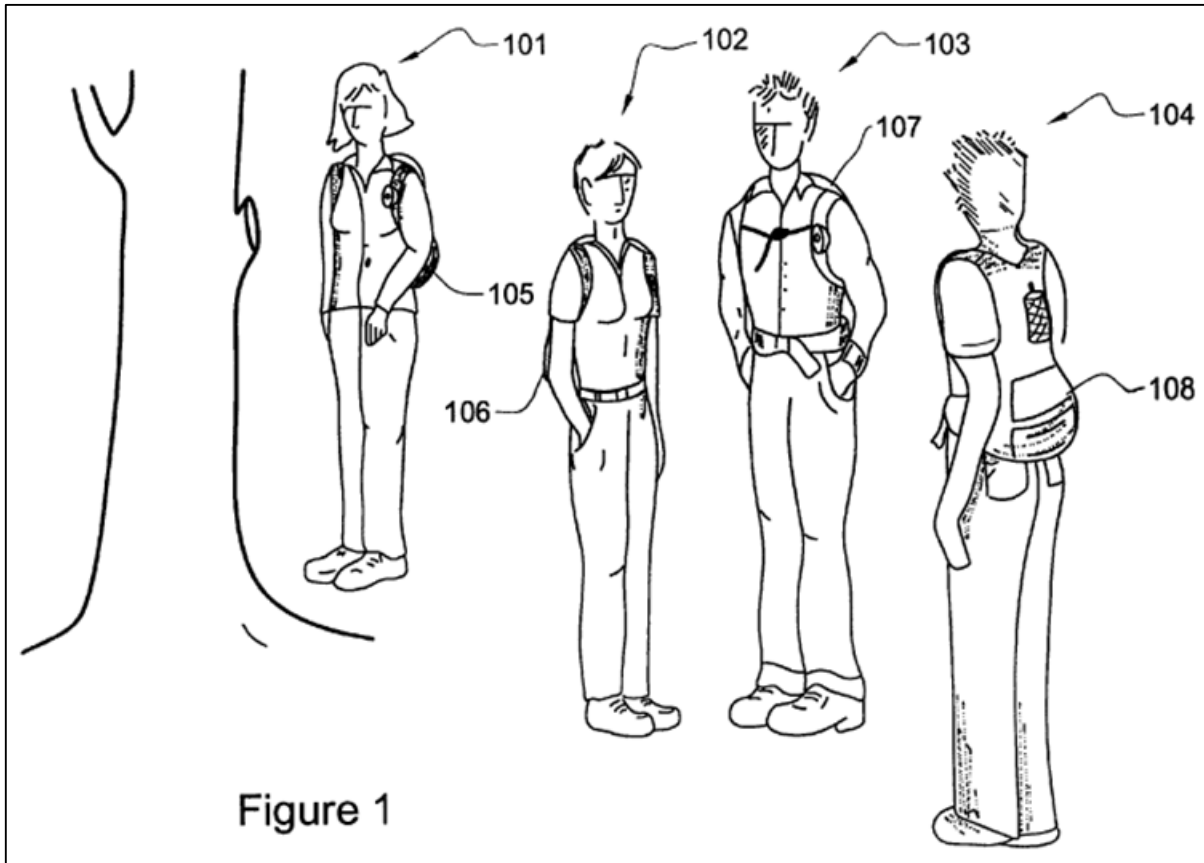
Challenged Claim 1 has mostly the same limitations as Claim 1 of the '814 Patent, which was found unpatentable in the Lectrosonics '1130 IPR and subsequently canceled, except that: Challenged Claim 1 also refers to (1) wirelessly transmitting the local audio data, (2) timestamps referencing local data to at least one of master timecodes (as opposed to local timecodes as recited in '814 Claim 1), and (3) unstamped local audio data; and canceled Claim 1 of the '814 Patent has a local timecode generator. See Ex. 1001, Claim 1; Ex. 1028, Claim 1, IPR Certificate at 1:6-7. Wirelessly transmitting the local audio data is present in Claim 13 of the

'307 Patent, which was found unpatentable in the Lectrosonics '972 IPR and subsequently canceled. Ex. 1015, Claims 12, 13, IPR Certificate at 1:5.

(1) **1[Pre]: “A system for recording locally generated audio comprising:”**

Regardless of whether the preamble of Claim 1 is limiting, Strub teaches it. In the Lectrosonics IPRs, the Board found that Strub discloses “a local audio device that records local audio and transmits the local audio to other remote devices” and “that the same local audio is stored at both the wearable local audio device as local audio data and the remote receiver/recorder as remotely recorded audio data.” See *supra* § VI.C. Zaxcom is collaterally estopped from disputing those findings. *Id.*

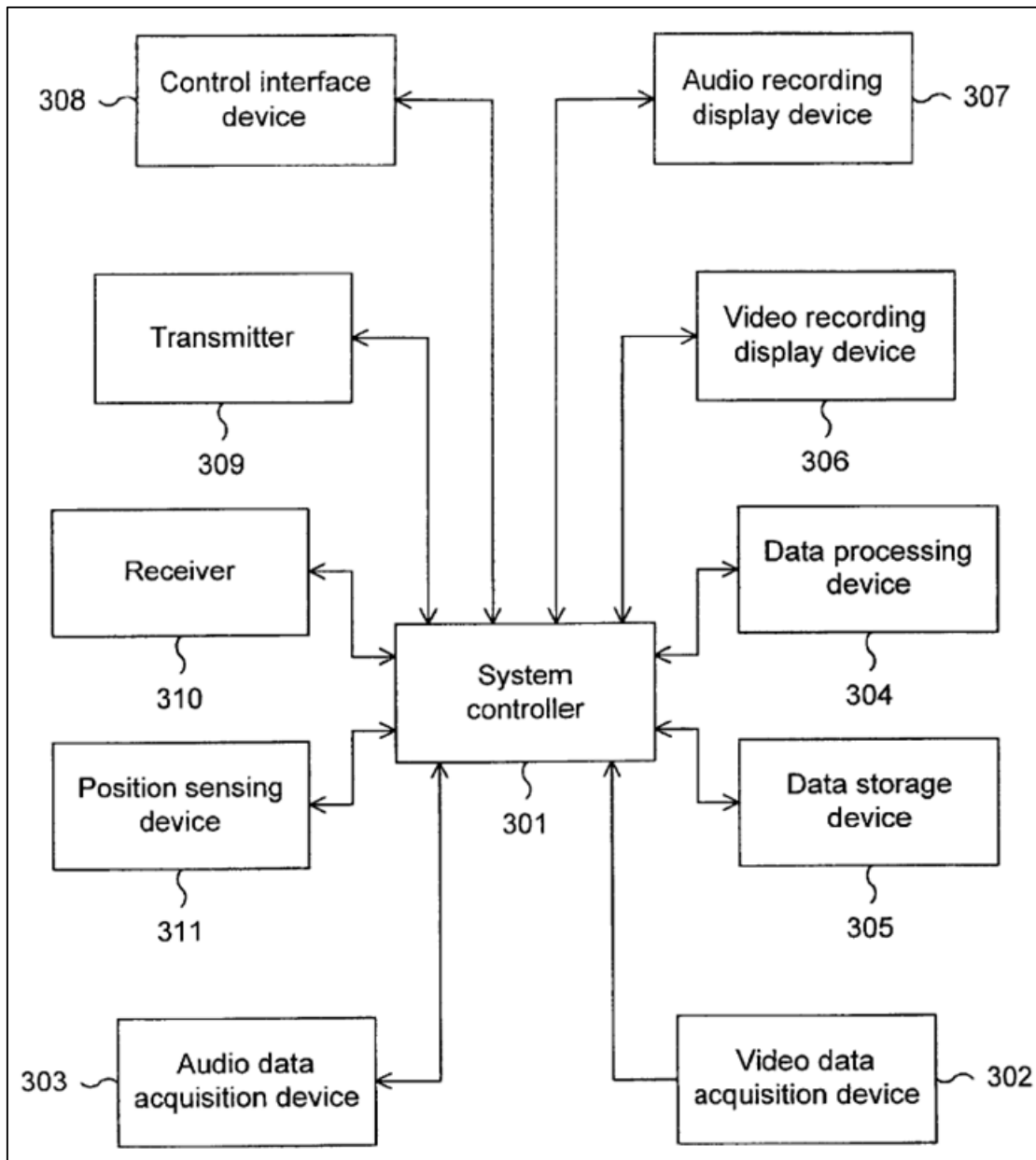
Specifically, Strub’s audio devices—recording units 105-108, 200, and 300—are worn by a plurality of users:



Ex. 1003, Fig. 1.

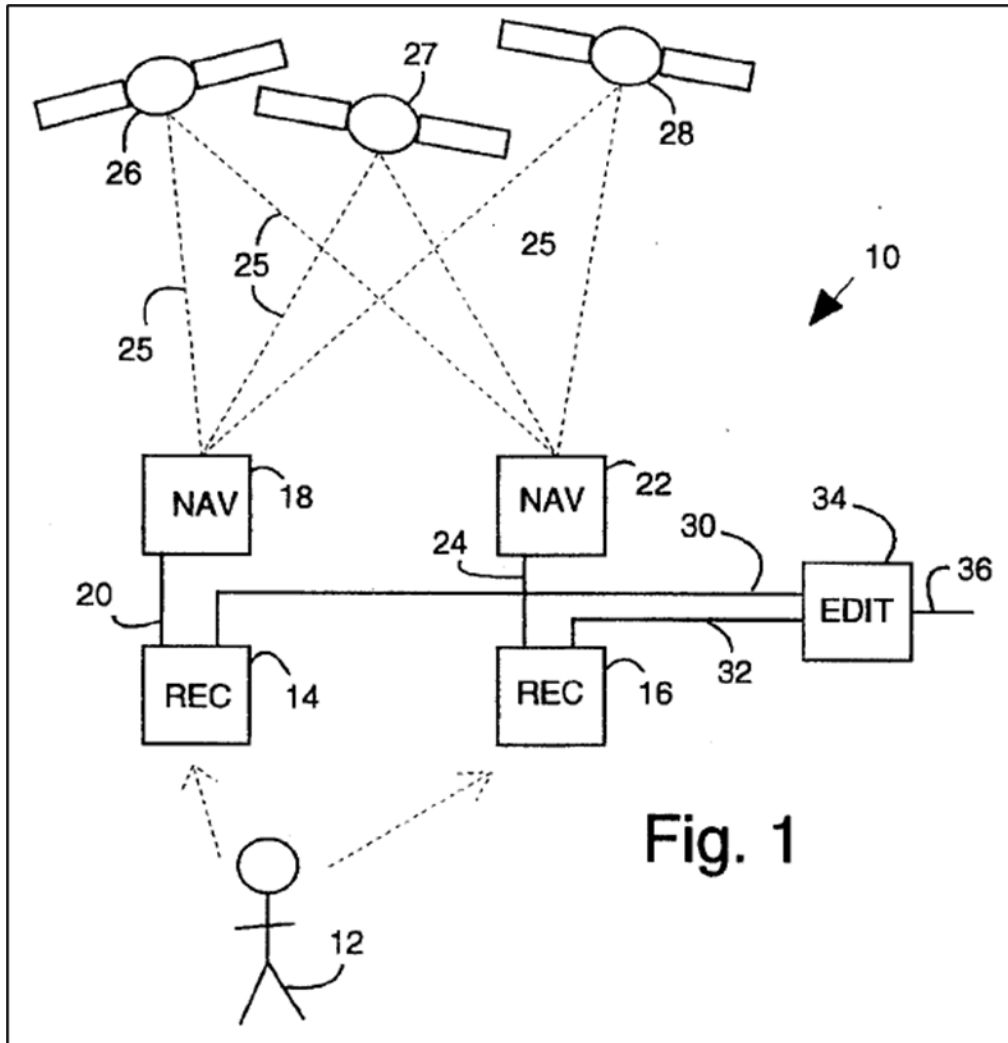
Each recording unit stores locally generated audio and transmits the audio to a remote device—*e.g.*, a different one of recording units 105-108, 200, and 300—which also records it. *See* Ex. 1003, 8:10-29, 8:50-53, 11:32-50, 12:13-21, 12:31-39 (“[T]ransmitter 309 transmits signals...representing recording data acquired by the recording unit 300 [to] other recording units.”), 25:35-49, 35:54-65, 37:18-40, 38:1-4, Figs. 1-3; *see generally id.* 35:53-38:39.

The internal components of Strub’s local and remote audio devices are depicted in Fig. 3:



The preamble is also taught by Woo. Woo's system includes at least one local audio device—*e.g.*, an arrangement comprising recorder 14, GPS receiver 18, and time code generator 43, or an arrangement comprising recorder 16, GPS receiver 22, and time code generator 43—which records locally generated audio and transmits

that audio to a remote recorder—editing station 34—which also records it, as depicted in Figs. 1 and 3:



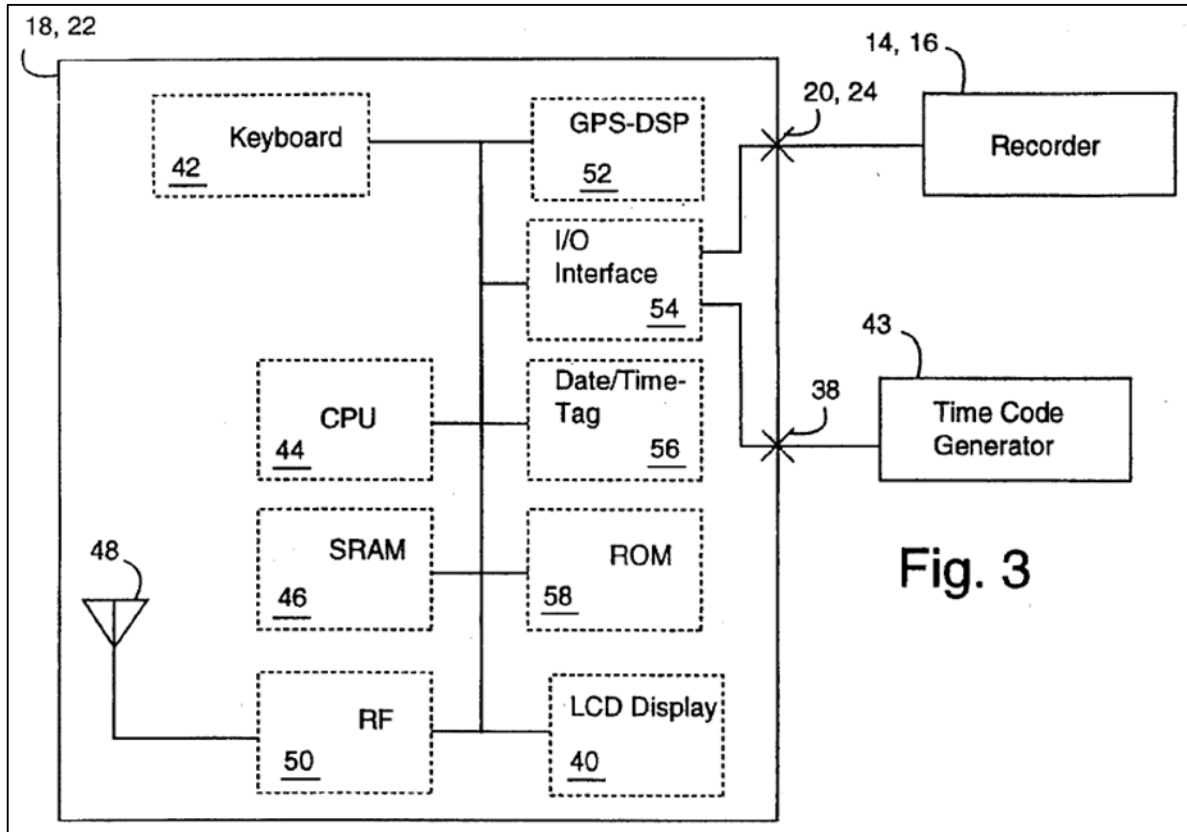


Fig. 3

See also Ex. 1004, 5:3-5 (recorders 14 and 16 “capture[] [a] performance”), 5:37-49 (recordings communicated to editing station 34), 8:32-44, 9:40-43, 9:56-62, Figs. 1, 3, 4; see also Ex. 1002, ¶¶ 123.

(2) **1[A]: “at least one master timecode generator for generating a plurality of master timecodes; and”**

In the Lectrosonics IPRs, the Board found that Strub teaches generating master time data, that Woo discloses a “master timecode generator for generating a plurality of timecodes,” and that a POSA would have been motivated to use Woo’s synchronization techniques in Strub’s system—findings that Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

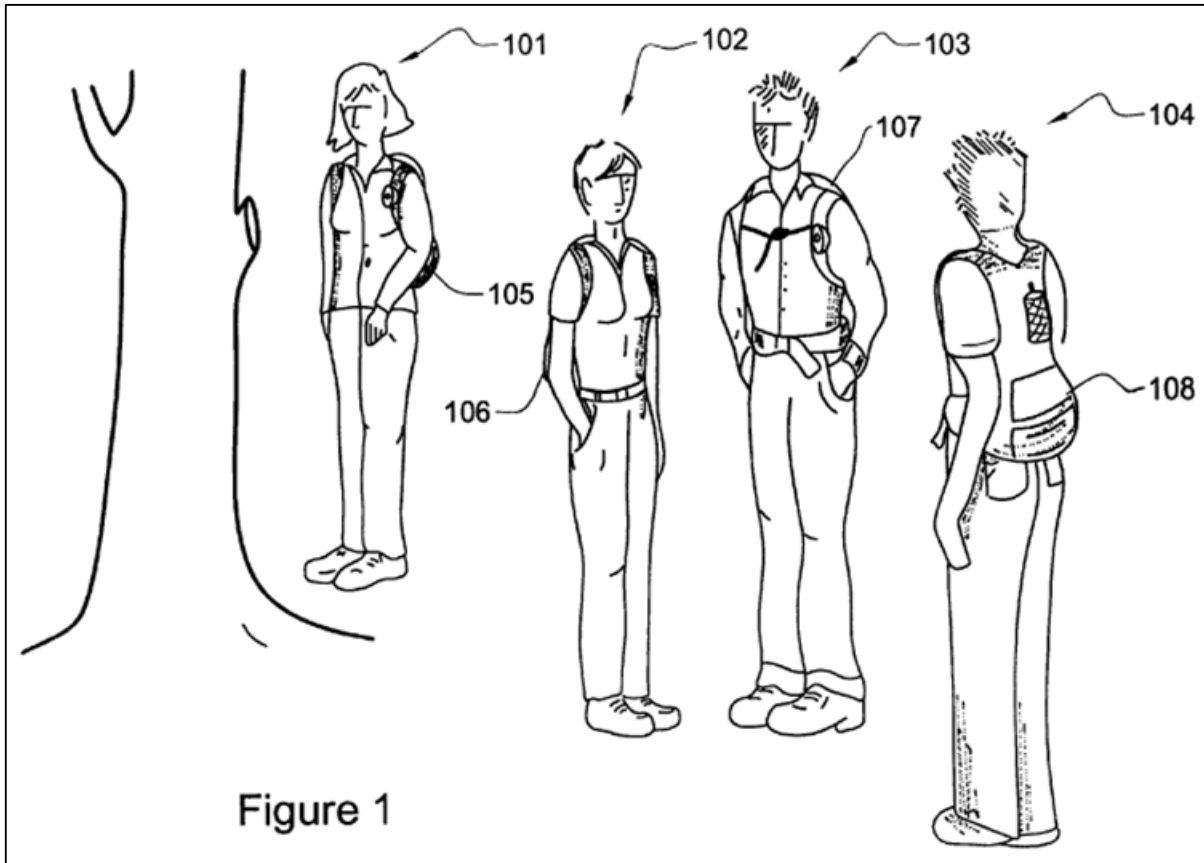
For example, Strub discloses receiving a master timecode—*e.g.*, GPS time information—from a master timecode generator—*e.g.*, a GPS satellite or SMPTE timecode source. Ex. 1003, 62:26-63:50 (receiving “current time that can be used as a clock to generate time-stamps” from a GPS or satellite services), 75:25-57 (“SMPTE time code input”); *see also id.* 63:50-60.

Woo also discloses master timecode generators—GPS satellites 26-28—for generating a plurality of master timecodes. Ex. 1004, 4:13-19 (“a GPS navigation receiver with a data output port for communicating time codes in SMPTE format”), 4:45-48, 5:5-10, 5:21-29 (receivers 18 and 22 receive “time clock information” from satellites), 5:54-67, 7:18-25, 7:26-47, 7:48-8:59, 8:60-9:19, 9:33-39, 9:45-55, 10:15-64, Figs. 2-4; Ex. 1002, ¶ 153.

(3) **1[B]: “at least one local audio device wearable by a creator of said locally generated audio including:”**

In the Lectrosonics IPRs, the Board found that Strub’s local audio device is “wearable by a creator of said locally generated audio.” *See supra* § VI.C . Zaxcom is collaterally estopped from disputing those findings. *Id.*

Specifically, Strub discloses at least one audio device—*e.g.*, one of recording units 105-108, 200, and 300, which are worn by a plurality of creators of locally generated audio—*e.g.*, people conversing at an event—as depicted in Figure 1:



See also *id.*, 8:10-29, 8:50-53, 11:32-50, 12:13-21, 25:35-49.

Strub expressly states that its local audio devices are wearable. *Id.* 4:21-31 (“wearable recording unit”), 14:59-15:11, 16:66-17:24, 38:65-39:11, 66:33-51, 67:54-68:10, 72:9-19; see also Ex. 1002, ¶ 121.

(4) **1[C]: “at least one local audio device receiver for wirelessly receiving said master timecodes;”**

In the Lectrosonics IPRs, the Board found that Strub teaches locally receiving or generating master time data, that Woo discloses a “master timecode generator for generating a plurality of timecodes” and synchronizing a local clock with a master time clock “just as disclosed by the [related ’902 and ’814] patent[s],” and that a

POSA would have been motivated to use Woo's synchronization techniques in Strub's system—findings that Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

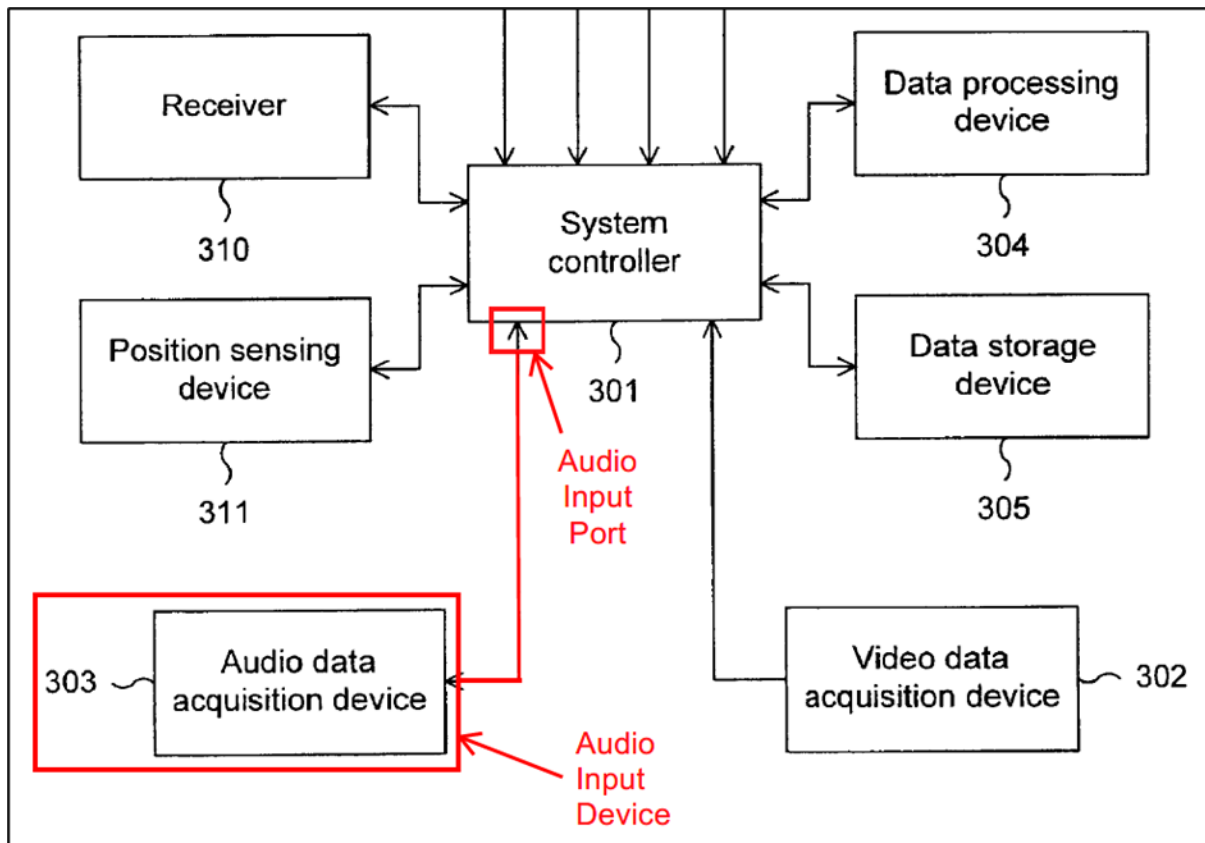
In particular, the position sensing device 311 in Strub's local audio device can be a GPS receiver which wirelessly—*i.e.*, via satellite signal—receives a master timecode—*e.g.*, GPS time information—from a master timecode generator—*e.g.*, a GPS satellite. Ex. 1003, 62:26-63:50 (“position sensing device” can be a “GPS receiver [which] receive[s] a signal representing the current time that can be used as a clock to generate time-stamps”), Fig. 3.

Woo's local audio device also has a GPS receiver which wirelessly—*i.e.*, via microwave radio transmissions 25—receives a master timecode from a master timecode generator—*e.g.*, one or more of GPS satellites 26-28. Ex. 1004, Abstract, 4:13-19 (“GPS navigation receiver for communicating time codes in SMPTE format”), 4:45-48, 5:5-10 (“satellite receiver[s] 18 [and 22] provide[.]...date and time information to...recorder[s] 14 [and 16]”), 5:21-29 (“[N]avigation satellite receivers 18 and 22 receive...microwave radio transmissions 25 from a constellation of orbiting satellites, [which] provide...time clock information....”), 5:54-67, 7:18-25, 7:26-47, 7:48-8:59, 8:60-9:19, 9:33-39, 9:45-55, 10:15-64, Figs. 2-4, 5 (“GPS Receiver” 122), 6 (“GPS Receiver” 142); Ex. 1002, ¶ 153.

(5) **1[D]: “at least one audio input port for receiving locally generated audio from an audio input device;”**

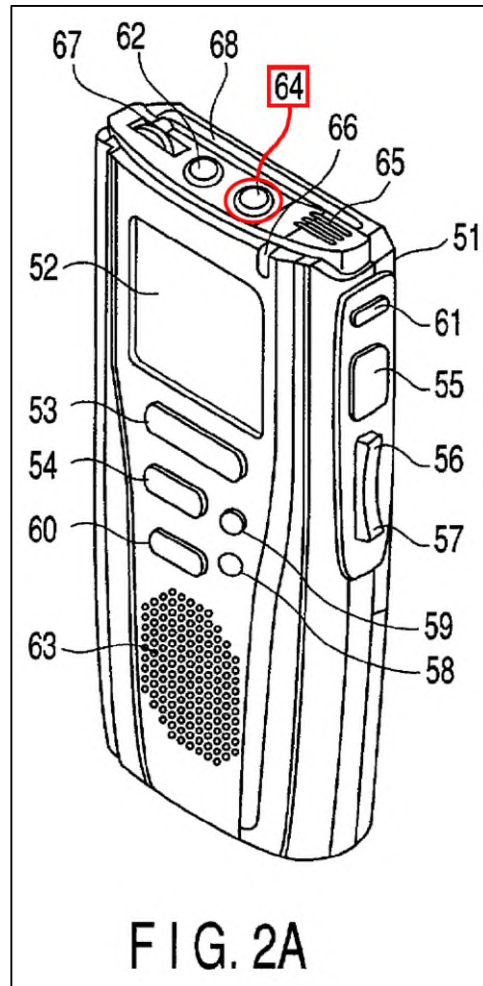
In the Lectrosonics IPRs, the Board found that each of Strub, Nagai, and Gleissner teaches an “audio input port for receiving said locally generated audio from an audio input device,” and that it would have been obvious to combine Strub with Nagai or Gleissner. *Supra* § VI.C. Zaxcom is collaterally estopped from disputing those findings. *Id.*

For example, Strub’s audio data acquisition device 303 is an audio input device, specifically a microphone. Ex. 1003, 21:65-22:2 (“[A]ny suitable audio data acquisition device (e.g., microphone) can be used in [the] recording unit....”); 22:64-23:31 (exemplary microphones used as audio input device), 25:25-49, 60:3-5 (“conventional microphone.”). The system controller 301 in Strub’s local audio recording unit 300 has a local audio input port—the controller’s connection to audio input device 303 (*e.g.*, a microphone)—for receiving locally generated audio from the audio input device 303:



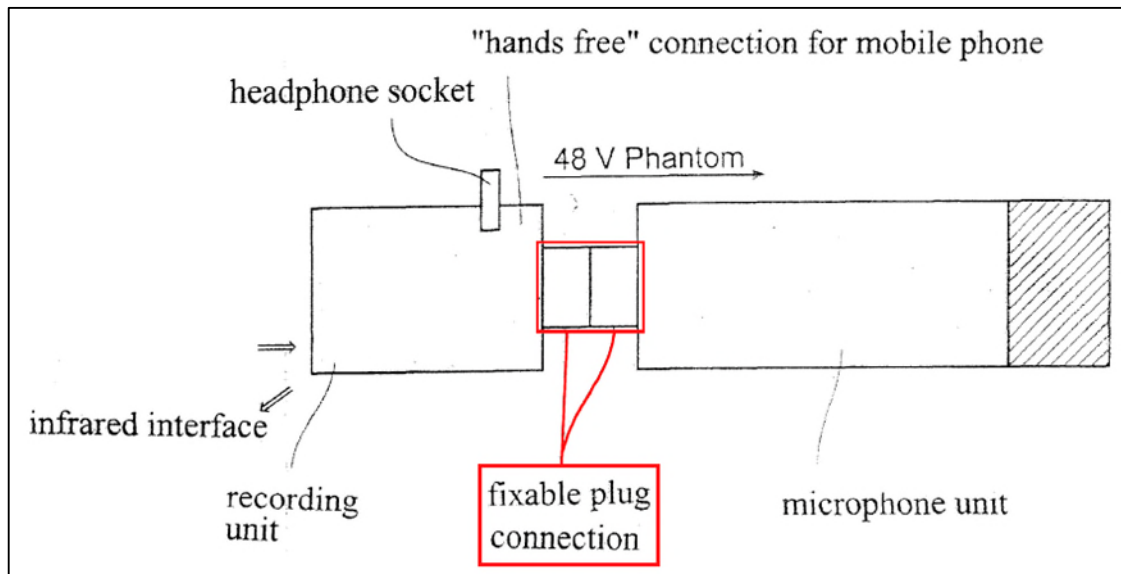
Ex. 1003, Fig. 3 (excerpted, annotated); *id.* 21:65-25:49, 68:63-69:67 (receiving audio from “lavalier microphone”); *see also id.* 64:50-65:3 (wired or wireless connections known in the art, which would include a standard microphone jack). Furthermore, Strub states: “It can be advantageous to mount the audio...data acquisition device[s] so that [it is] detachably attached.” *Id.* 69:23-26. A POSA would interpret Strub’s statement about detachability as meaning that the microphone is not soldered/hard-wired, but connected through an audio input port such as a microphone jack/plug.

To the extent Zaxcom contends that Strub does not disclose Element 1[D], this element is taught by Nagai and Gleissner. Nagai’s audio recorder has an audio input port—“mike [sic] jack” 2 or 64—for coupling to an audio input device—an external microphone, or “mike [sic]”—to receive the locally generated audio:



Ex. 1005, Fig. 2A (annotated); *id.* [0100], [0109], and [0139], Fig. 1.

Gleissner’s audio recorder has a conventional audio input port—an XLR plug connector—to couple to an audio input device—a microphone—to receive the locally generated audio:



Ex. 1006, Fig. 1 (annotated); *id.* [0013] (“[T]he recording unit can be coupled together with [a] microphone[] [using] an XLR connector....”), [0024], [0032]. Gleissner provides explicit motivation for using a standard microphone connector: “This has the advantage that the recording unit can be coupled together with practically any desired microphones, because an XLR connector is generally formed as the preferred embodiment in the case of microphones.” *Id.* [0013].

Woo refers to using a recorder 14 to “record the live performance of a performer 12, e.g., a singer or actor.” Ex. 1004, 5:1-5. Recorder 14 necessarily would have had an audio input port to couple to a microphone in order to receive the sound from the performer. *See* Ex. 1002, ¶ 133.

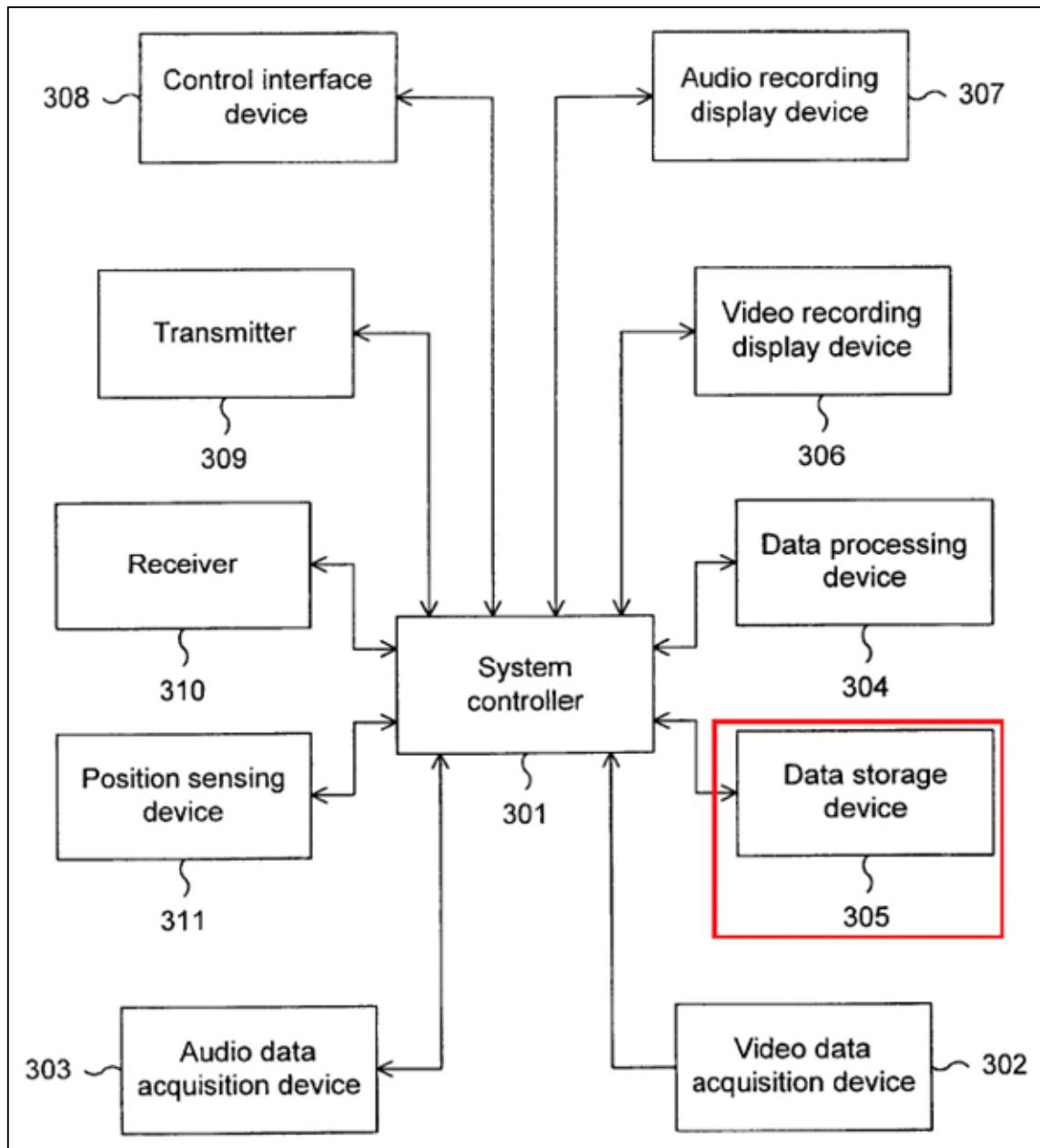
Furthermore, a POSA would have been motivated to include Nagai’s microphone jack or Gleissner’s microphone plug connection in Strub’s and/or Woo’s local audio device because there were many alternative types and brands of

microphones that were commercially available as of the priority date of the '443 Patent, and the operator would choose one according to the particular application. Ex. 1002, ¶ 134. Examples are provided in Strub: analog, digital, directional, omni-directional, lavalier, spatial-distribution-detection, lavalier stereo omni-directional (*e.g.*, Lectret 5200), stereo directional (*e.g.*, Sanken CSS-5), and microphone arrays for beam forming. Ex. 1003, 21:65-22:2, 22:65-23:31, 24:61-64, 25:35-49, 29:35-37, 31:37-45, 32:17-26, 68:63-69:18, 84:52-62; Ex. 1002, ¶ 134. A POSA would have understood the advantages of using Nagai's or Gleissner's standard microphone jacks and plugs to allow different kinds of microphones to be easily swapped in and out of Strubs' and Woo's audio recording systems according to the application, and thus would have considered the combination obvious. Ex. 1002, ¶ 134.

(6) **1[E]: “at least one memory;”**

In the Lectrosonics IPRs, the Board found that Strub teaches that the local audio device has a memory, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

Specifically, Strub's local audio device has at least one memory—*e.g.*, data storage device 305:



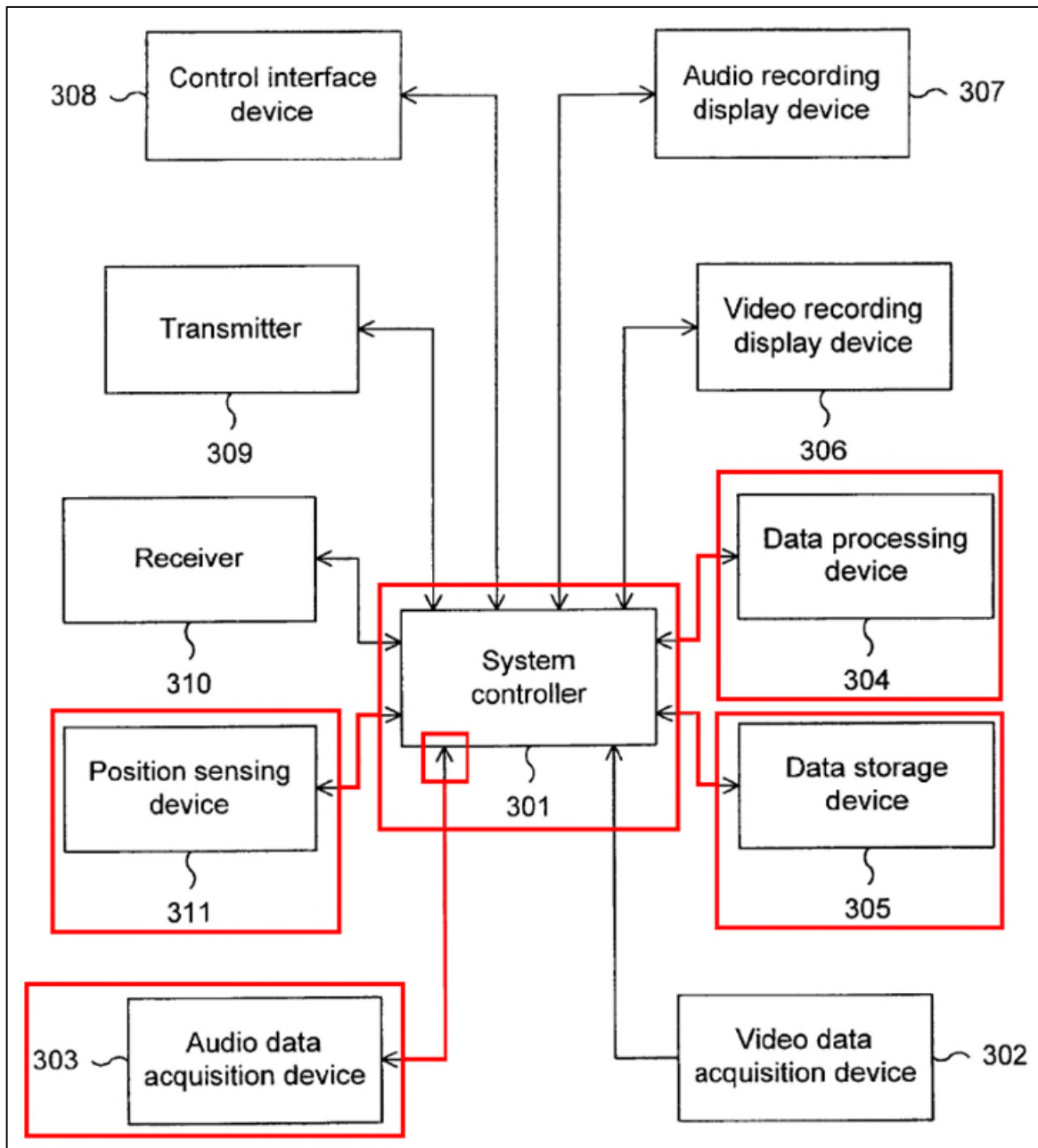
Ex. 1003, Fig. 3 (annotated).

Memory 305 may include a hard disk, removable media (*e.g.*, recordable DVD), or solid state or flash memory. *Id.*, 27:36-51, 33:20-35:50, 76:6-34, 94:15-20, Fig. 3; Ex. 1002, ¶ 137.

(7) **1[F]: “at least one control unit in communication with said local audio device receiver, said audio input device, and said memory for creating local audio data from said locally generated audio and storing said local audio data in said memory; and”**

In the Lectrosonics IPRs, the Board found that Strub teaches (1) “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator,” and (2) storing the locally generated audio as audio data in the memory of the local audio device, findings that Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

In particular, Strub’s local audio device includes a control unit—e.g., system controller 301 and/or data processing device 304—which is in communication with the GPS-based position sensing device 311 (the local audio device receiver), the audio input port (the connection to audio data acquisition device 303), and the memory (data storage device 305):



Ex. 1003, Fig. 3 (annotated); *id.* 12:4-13, 13:36-14:13.

In addition, a POSA would have considered it obvious to couple Strub's control unit 301 to an audio input port such as Nagai's "mike jack" or Gleissner's

XLR plug connector, described *supra* Element 1[D]; *see also* Ex. 1006, [0013] (advantages of standard microphone connector); Ex. 1002, ¶ 148.

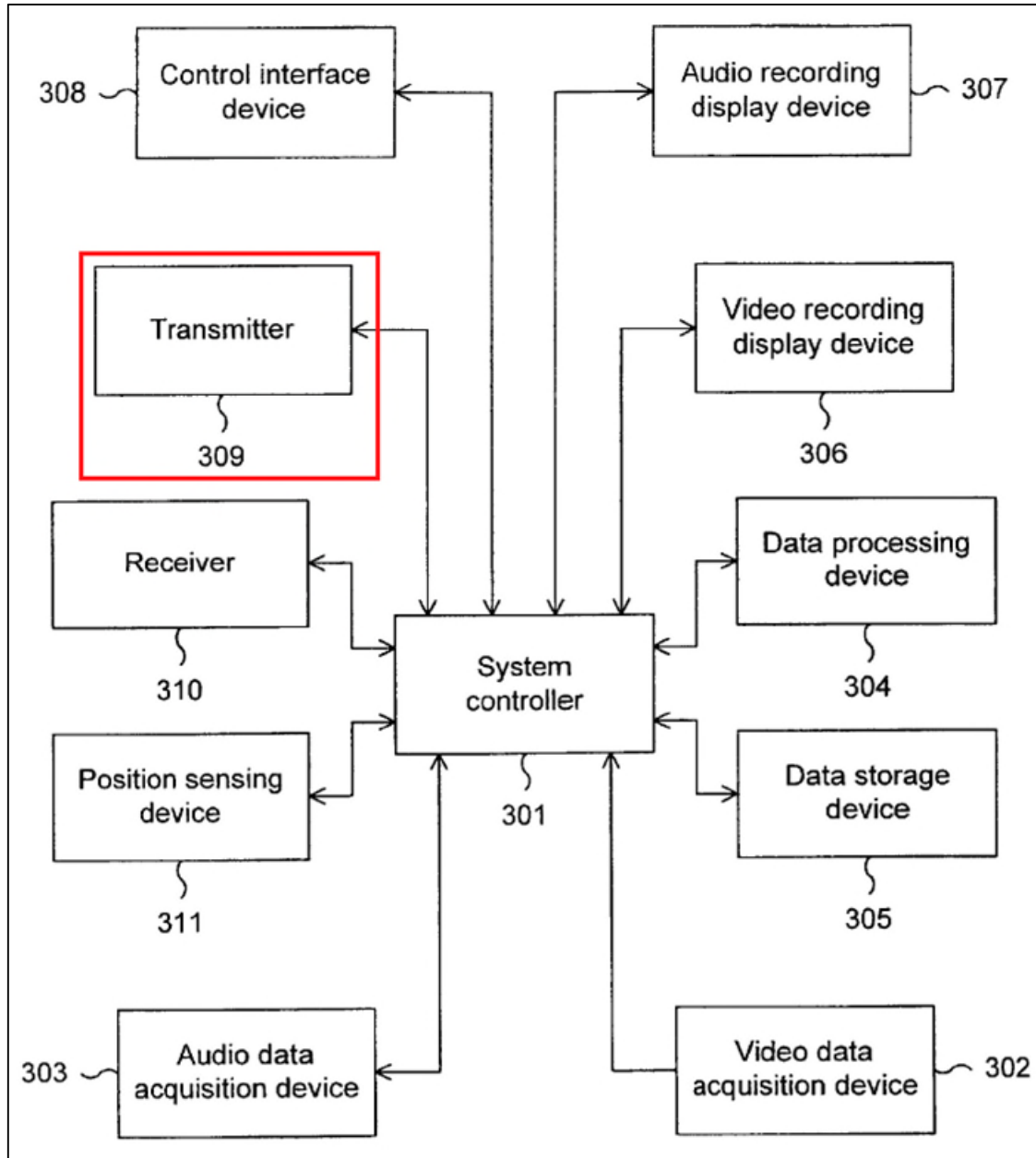
Strub's system controller 301 acquires locally generated audio via audio data acquisition device 303 and stores the audio as local audio data in memory—data storage device 305. Ex. 1003, 12:10-21 (“[A]udio data acquisition device 303 acquire[s]...audio recording data [which] can be stored...in the data storage device 305....”).

Woo's system also stores locally generated audio in a memory as local audio data. Ex. 1004, 4:62-64 (“sound and picture recordings” stored in “a plurality of independent recording devices”), 5:1-5 (recorders 14 and 16 “capture” performance), 5:37-45; Ex. 1002, ¶ 150.

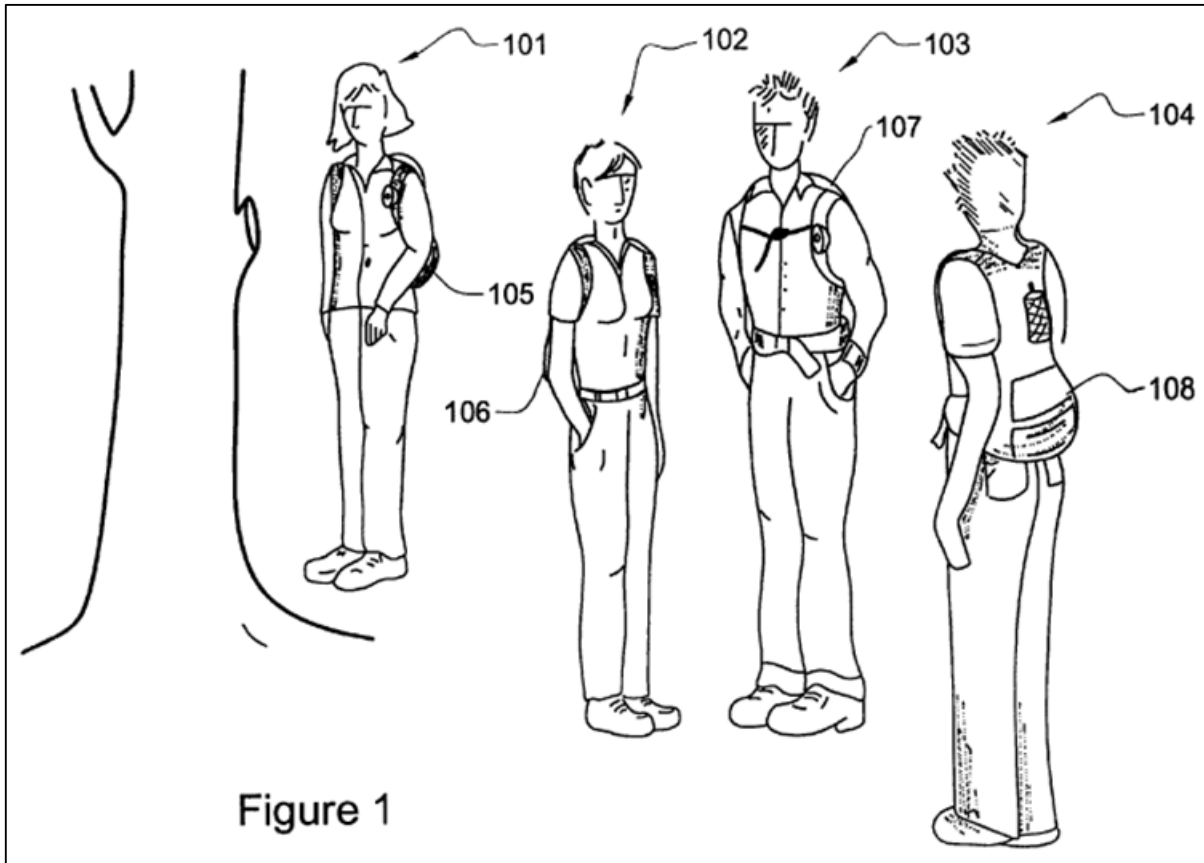
(8) **1[G]: “at least one local audio device wireless transmitter for wirelessly transmitting said local audio data in real time, said at least one local audio device wireless transmitter in communication with said at least one control unit;”**

In the Lectrosonics IPRs, the Board found that Strub teaches that the local audio device wirelessly transmits the locally generated audio to a remote recorder, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

In particular, Strub's recording unit includes a wireless transmitter 309 for wirelessly transmitting audio to the other mobile and physically separated recording units:

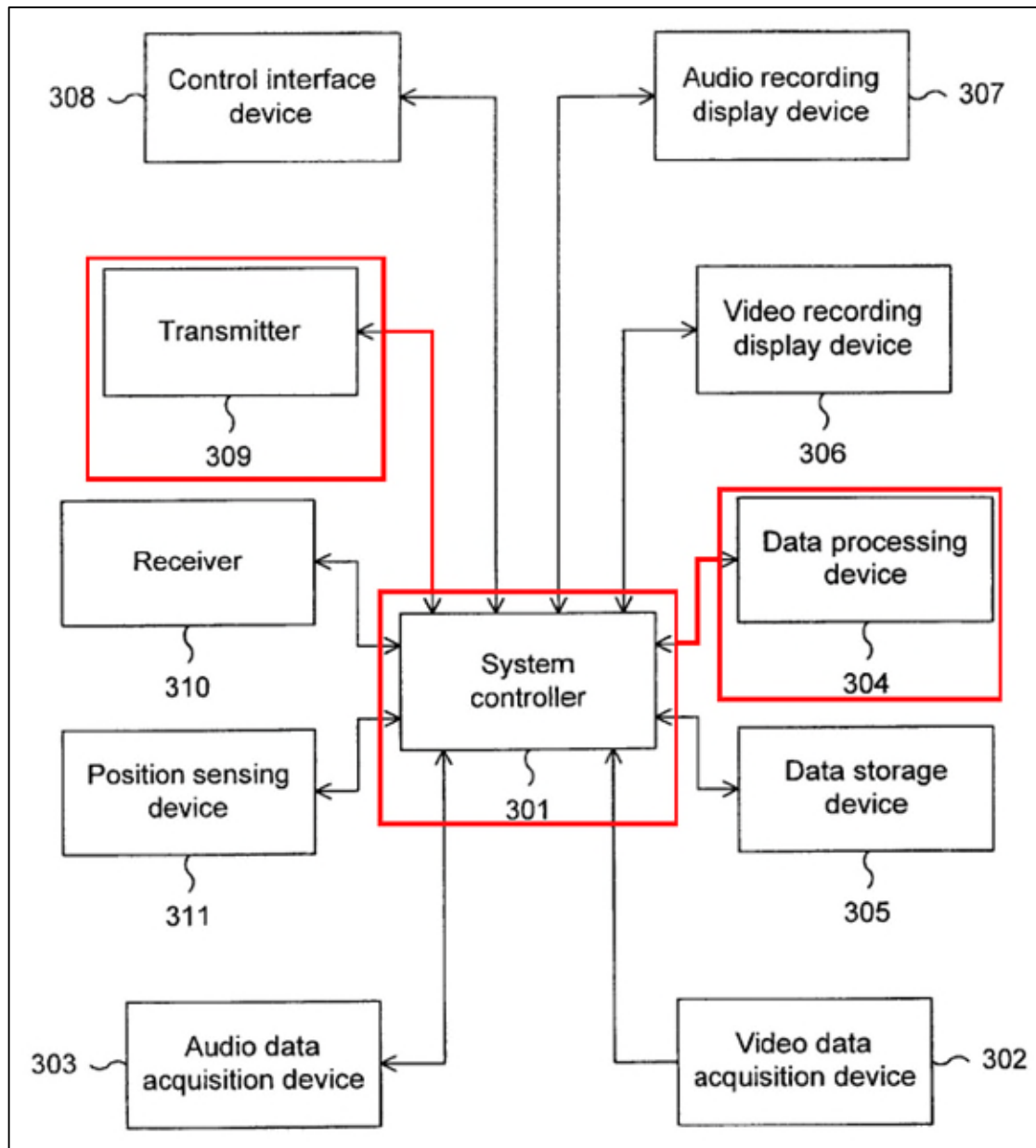


Ex. 1003, Fig. 3 (annotated).



See also id. 12:31-46, 35:51-36:29 (“transmitter that enables signals representing the recording data ... to be broadcast from the recording unit”).

Strub’s wireless transmitter 309 is in communication with the control unit—system controller 301 and/or data processing device 304:



Ex. 1003, Fig. 3 (annotated); *id.* 12:4-13, 13:36-14:13.

Strub's transmitter 309 transmits the local audio data in real time. Ex. 1003, 1:26-35 ("recording of the event by multiple participants..., often *simultaneously.*"), 4:54-57 ("recordings...shared between or among recording units *during the event.*"); 10:25-49 ("recordings...shared between or among recording

units *during the event* so that recorders can observe *recordings that...are being, obtained by other recording units.*”), 35:61-36:2, 38:8 (“Recording data can be *transmitted as acquired.*”), 38:20-24, 44:48-45:7; 79:54-80:9, 85:18-23.

To the extent Zaxcom contends that Strub does not disclose real-time transmission of the local audio data, that limitation is taught by Woo. Woo’s local audio device—*e.g.*, an arrangement comprising recorder 14, GPS receiver 18, and time code generator 43, or an arrangement comprising recorder 16, GPS receiver 22, and time code generator 43—can transmit locally generated audio by “radio link”—*i.e.*, wirelessly to editing station 34:

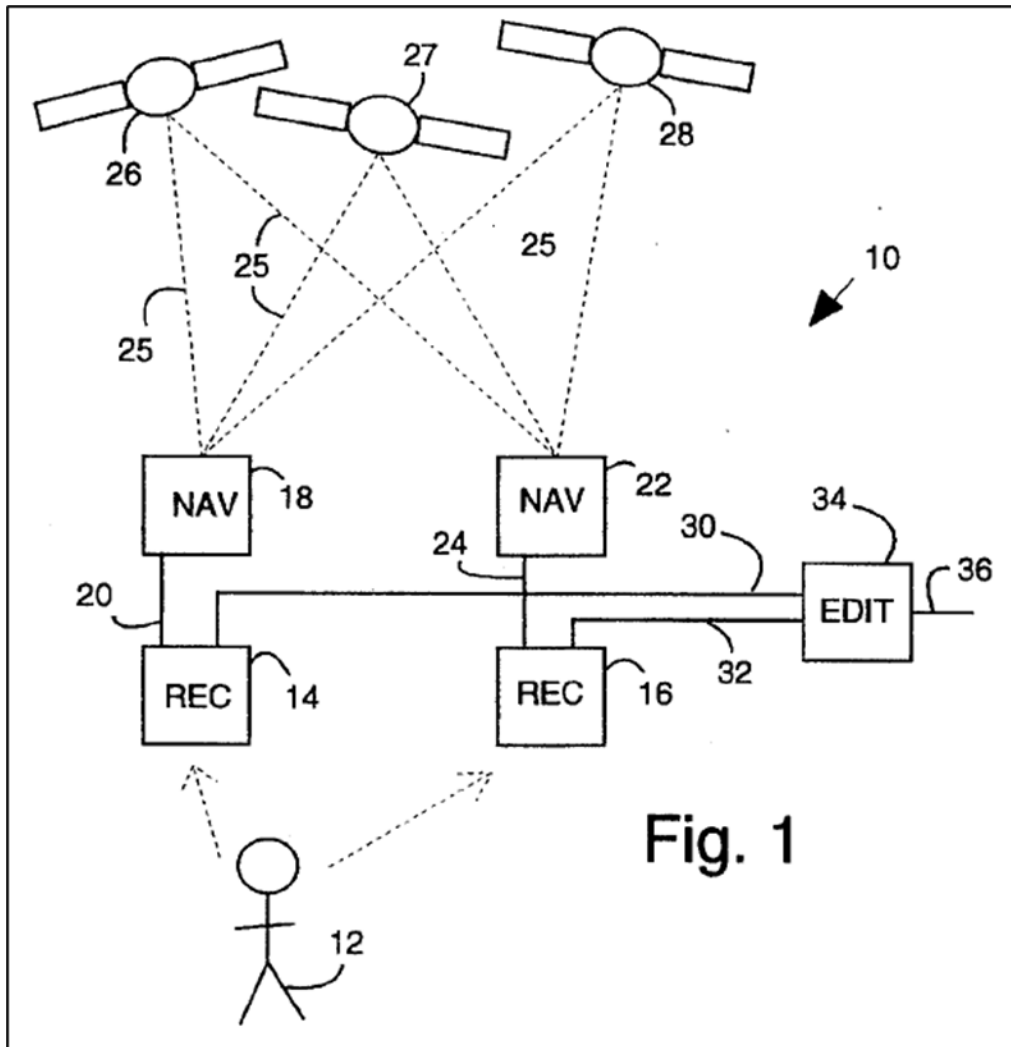


Fig. 1

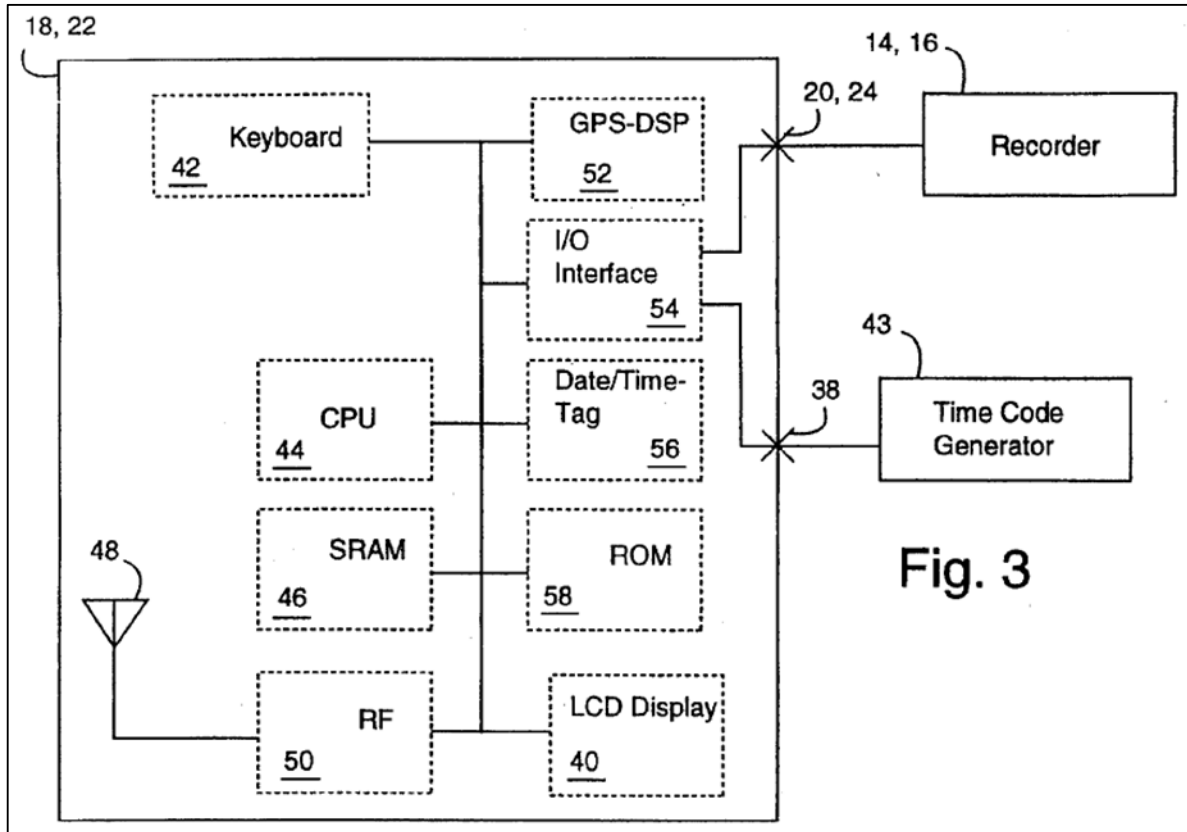


Fig. 3

Ex. 1004, Figs. 1, 3; *id.* 5:37-49 (“The connections 30 and 32 represent the communication of the respective recordings by[, e.g.,] **radio link**...to the editing station 34....”);² Ex. 1002, ¶ 172.

Woo teaches transmission of the local audio data “in real-time.” *Id.* 8:51-54 (“In step 114, **the combining and generating may be done in real-time** with the performance....”), 10:7-10 (“**the combining and generating are done in real-time**”); see Ex. 1002, ¶ 173.

² Emphasis added throughout unless otherwise indicated.

(9) **1[H]: “wherein said local audio data includes stamped local audio data and unstamped local audio data;”**

In the Lectrosonics IPRs, the Board found that Strub teaches a “local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory,” a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

The system controller 301 in Strub’s local audio device “can include a clock that is used to time-stamp the recording data obtained by the recording unit.” Ex. 1003, 13:50-58, 63:56-60. The time stamps comprise timecodes. *Id.* 6:65-7:24 (storing a “*time code* on the videotape”); 29:42-62 (records audio and visual data and “other types of data (e.g.,...*time codes*)”); 77:24-28 (identifying exemplary portable video recorders that “*write a time code to the linear data storage medium.*”); 78:7-40; 84:20-25. *See also* 63:12-49 (GPS time signals to “generate time-stamps for the recording data”).

Woo’s local audio device includes “a date and time tag unit 56 and a read only memory (ROM) 58.” Ex. 1004, 7:59-60, Fig. 3. “The ROM 58...includes an application program for generating SMPTE time codes....” *Id.* 8:21-22. In addition, Woo’s local audio device can employ “commercially-available time code generator 43” to generate time codes. *Id.* 7:28-29, Fig. 3. Date and time tag unit 56 provides

time stamps, which are used to stamp at least a portion of the local audio data. *Id.*, 8:11-21, 8:25-44, Figs. 3, 4; *see also id.* 1:60-2:1, 5:37-45; Ex. 1002, ¶ 162.

In addition to stamped audio data, Strub's local audio data includes unstamped audio data. For example, Strub provides an example in which a time-stamp indicates only "the time at which a displayed recording was obtained." Ex. 1003, 13:54-56. A POSA would understand Strub's reference to "the time at which a...recording was obtained" to refer to the time that the entire recording was completed—i.e., the time that either the first or final audio sample of the recording was captured. Ex. 1002, ¶ 163. Thus, in that example, the time-stamp applies only to the first or final audio sample, whereas the other samples are unstamped.

In addition, a POSA would have been motivated, and would have considered it obvious, to stamp only the first or last sample in an audio recording in order to conserve transmission bandwidth, leaving the other samples unstamped. The time between samples in a digital recording is known. Thus, the timing of all samples easily can be reconstructed starting from the time-stamp associated with the first or last sample. Ex. 1002, ¶ 163.

Additionally, Strub teaches that the system controller can store information "that identifies **particular** stored recording data," and gives the example of applying a "time-stamp" to the recording data, indicating that only particular audio data is stamped and other audio data is unstamped. Ex. 1003, 13:48-54; Ex. 1002, ¶ 164.

(10) **1[I]: “wherein said stamped local audio data includes at least one timestamp to reference at least a portion of said local audio data to at least one of said master timecodes; and”**

Strub discloses at least one timestamp to reference at least a portion of local audio data to at least one of the master timecodes, for instance applying GPS timestamps to the audio data. *See, e.g.*, Ex. 1003, 63:12-49 (recording unit using “GPS time signal” to “generate time-stamps for the recording data”).

Woo also discloses at least one first timestamp to reference at least a portion of local audio data to at least one of the master timecodes, including timecodes from GPS. *See* Ex. 1004, 8:25-36 (tagging first recording with date and time code information from satellite receiver); 4:13-19, 4:45-48, 5:5-13, 7:26-35, 7:49-53, 9:33-39, 10:44-60, Figs. 2-4; Ex. 1002, ¶ 175.

(11) **1[J]: “wherein said unstamped local audio data does not include a reference to said master timecodes.”**

As discussed *supra* Element 1[H], Strub discloses unstamped audio, *e.g.*, audio samples other than the first or final sample for an obtained recording. Necessarily, these unstamped samples have no reference to a master timecode. Additionally and alternatively, Strub teaches that the local audio data may be stamped using locally generated timecodes, and therefore the local audio data would be referenced to local, rather than master, timecodes. *See* Ex. 1003, 13:52-58 (system controller 301 includes a local “clock that is used to time-stamp the

recording data”), 63:56-60 (recording unit has local “internal clock” to time-stamp data); *see also* Ex. 1002, ¶ 178.

- b. **Claim 2: “A system according to claim 1, said system further comprising: at least one remote control unit having an RCU transmitter capable of transmitting digital commands; wherein said remote control unit controls at least one function of said at least one local audio device via transmission of at least one of said digital commands.”**

Strub discloses persons who wear recording units, which can be in the form of a “backpack.” *See* Ex. 1003, 8:7-20, 16:49-57, Fig. 1 (persons 101-104 wearing recording units 105-108, respectively). Each recording unit includes a “system controller” 301. *Id.* 12:4-13, Fig. 3; *see also id.* 7:44-47. Strub further discloses the use of a “control interface device” (i.e., remote control unit) to control the recording unit. *Id.* 45:51-56; Fig. 5. Strub teaches that the control interface device is remote and separate from the recording unit. *Id.* 47:25-32 (“[I]t is not necessary...to mount the control interface device on the recorder.”). Therefore, the control interface device may be a handheld device placed in the pocket (*id.* 46:18-24), a brooch (*id.* 46:54-56), a watch (*id.*), or attached to a wristband (*id.* 47:2-9), or can be mounted on an object other than the person/recorder, such as a bicycle (*id.* 47:33-48). The control interface device transmits, and the system controller (i.e. control unit) receives, “instructions” (i.e., digital commands), including start/stop operation (*id.* 47:50-56), turn recording on or off (47:61-63), a kill switch to shut down power, thus stopping

both recording and transmission (48:5-17), control of the data storage device (49:4-14), allow/prohibit transmission of recordings to other recording units (49:23-31), specify data compression (49:37-45), marking portions of a recording (49:46-55), and begin/terminate display of a recording (57:25-32); *see also id.* 60:12-23, 60:63-61:4, 61:51-62:13; Ex. 1002, ¶ 210.

- c. **Claim 3: “ A system according to claim 2, wherein said at least one function includes at least one of the group consisting of playing of said locally generated audio data from said memory, enabling and disabling recording by said at least one local audio device, adjusting a transmitter frequency of said at least one local audio device, adjusting a frequency of said at least one local audio device receiver, enabling and disabling said at least one local audio device wireless transmitter of said at least one local audio device, adjusting a gain of said at least one audio input port, adjusting a high pass filter of said at least one local audio device, selecting record mode of said at least one local audio device, entering at least one master timecode value, storing data in protected areas of said at least one memory, requesting status of said at least one local audio device, and combinations thereof.”**

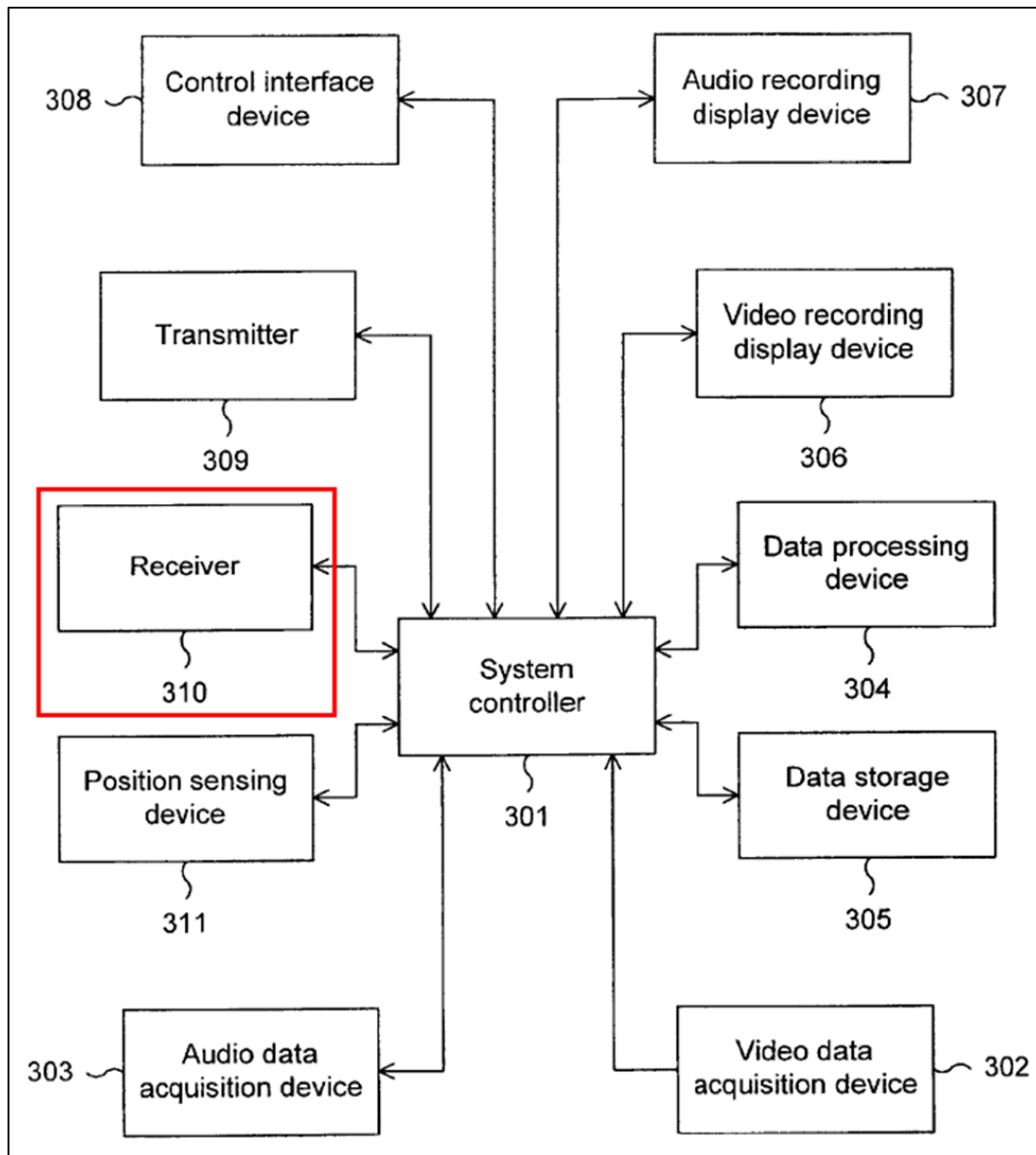
Functions of the local audio device which are controlled by Strub’s remote control unit include: (1) begin display of a recording—*i.e.*, play the locally generated audio data from the memory; (2) turn recording on or off—*i.e.*, enable or disable recording by the local audio device; (3) allow/prohibit transmission of recordings to other recording units—which necessarily includes enabling/disabling the wireless transmitter; (4) start/stop operation—which necessarily includes

enabling/disabling recording and enabling/disabling the wireless transmitter; and (5) a kill switch—which disables both recording and the wireless transmitter. *See supra* Claim 2; Ex. 1002, ¶ 210.

d. **Claim 7.**

(1) **7[A]: “A system according to claim 1, said system further comprising: at least one of the group consisting of a recorder, a receiver, and combinations thereof, said at least one of the group consisting of said recorder, said receiver, and combinations thereof coupled wirelessly to said at least one local audio device;”**

Strub teaches multiple local audio devices (i.e., “recording units”). Ex. 1003, Fig.1 (105-108), 8:6-20. A given local audio device wirelessly “transmits” audio data to “other” local audio devices via its transmitter 309. 12:31-39, Fig. 3. The “other” local audio devices include a receiver 310 to receive the transmitted audio data and record it in data storage device 305. 35:54-65 (“each recording unit can include a receiver that...recei[ves]...signals broadcast from other recording units that represent the recording data”; “enabling [the] recording unit to ... store...a recording”), 37:18-40 (“[R]ecording data from multiple recording units can be recorded simultaneously”), 12:39-46, 12:16-21. Thus, the receiving local audio device comprises a receiver and a recorder that are wirelessly coupled to the transmitting local audio device.



This element is also taught by Woo. Recorders 14 and 16 (i.e., “local audio devices”) wirelessly “transmit” their recordings to editing station 34 using a “radio link.” Ex. 1004. 5:37-45, Fig. 1:

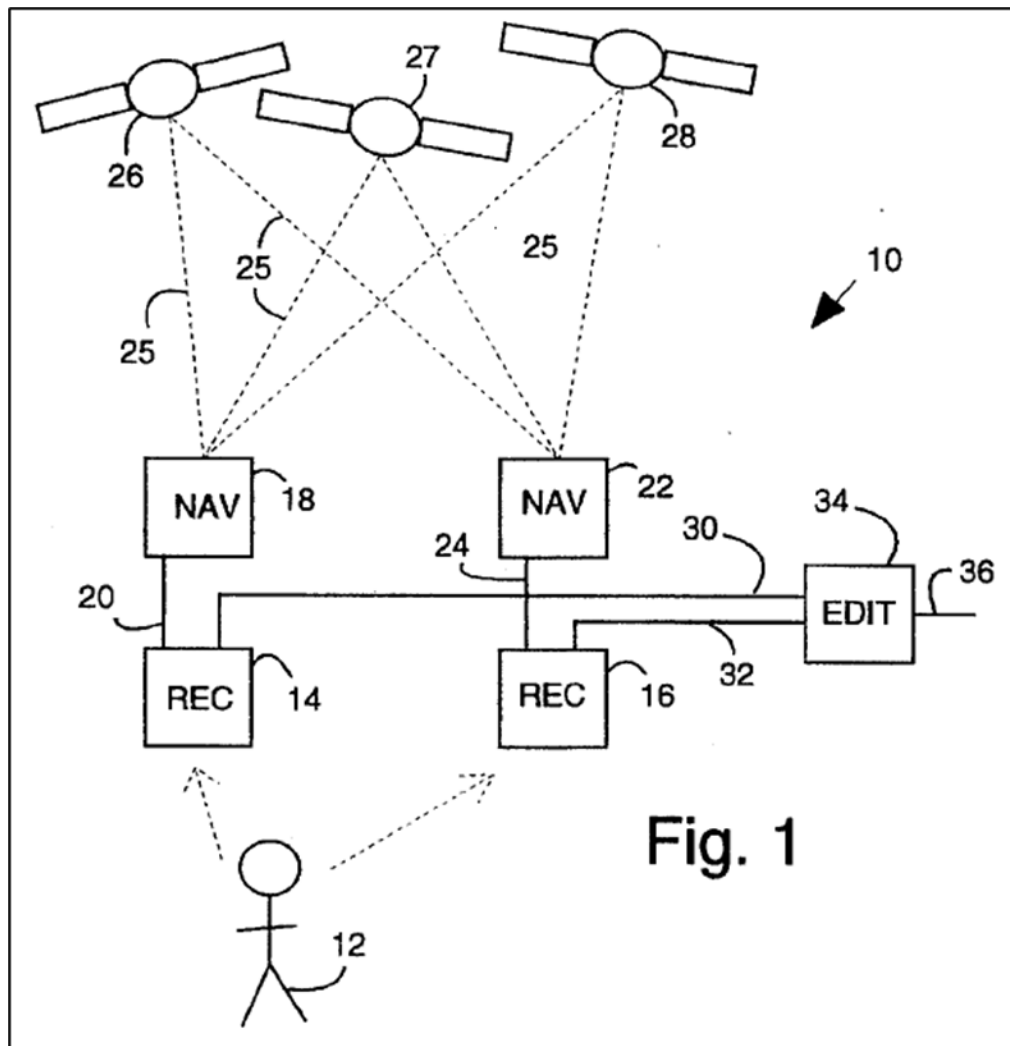


Fig. 1

Editing station 34 necessarily includes a receiver to receive the recordings transmitted over the radio link. 5:37-49 (“The connections 30 and 32 represent the communication of the respective recordings by wire, *radio link*”). Editing station 34 also comprises a recorder since it receives and stores the audio for subsequent “editing” and “layback” [sic playback]. *Id.* at 5:39-42, 1:21-28 (editing used to combine recorded sounds), 11:12-14, 12:11-13. Thus, a POSA would have understood the receiver and recorder of editing station 34 to be wirelessly coupled

to recorders 14 and 16 via the radio link. Ex. 1002, ¶¶ 236-237; *see also supra* Element 1[G].

(2) **7[B]: “wherein said at least one local audio device transmits said local audio data to said at least one of the group consisting of said recorder, said receiver, and combinations thereof wirelessly via said at least one local audio device wireless transmitter.”**

In each of Strub and Woo, the local audio device transmits the local audio data to the receiver/recorder wirelessly via a local audio device wireless transmitter. *See supra* Elements 1[G], 7[A].

- e. **Claim 8: “A system according to claim 7, said system further comprising: at least one remote control unit having an RCU transmitter capable of transmitting digital commands; wherein said remote control unit controls at least one function of at least one of the group consisting of said at least one local audio device, said receiver, said recorder, and combinations thereof via transmission of at least one of said digital commands.”**

Strub meets the additional limitations of Claim 8. *See supra* Claim 2.

- f. **Claim 15: “A system according to claim 1, wherein said local audio data is combined electronically to create a single multi-track data file.”**

Strub discloses or renders obvious combining the local audio data electronically to create a single multi-track data file. For example, each of Strub’s recording units 105-108 and 300 receives and displays multiple tracks of local audio data received from the other recording units. Ex., 1003, 12:21-36 (“The visual recording display device 306 and the audio recording display device

307...display...the...audio recording...being obtained by...another recording unit....The transmitter 309 transmits...recording data [that] can be used by other recording units (e.g., to generate a display of the visual and/or audio recording being obtained by the recording unit 300”), 37:18-40 (recorders exchange tracks after the event, enabling each unit to obtain recordings made by the others), 44:48-45:7 (“simultaneously displaying multiple visual recordings at one time”), 66:7-25, Fig. 1. Strub teaches that the audio tracks “can be blended in any appropriate way. For example, an audio mixer can be used to select audio recording data from multiple audio recordings..., and the selected audio recording data used to generate an audio display.” *Id.* 92:38-42; *see also id.* 92:24-37, 92:43-66. Strub explains that “[s]imultaneous display” of separate audio tracks from the different recorders “can give a more complete representation of the audio content.” *Id.* 92:66-93:11; *see also id.* 79:54-80:9, 85:28-56. In view of Strub’s teaching of the value of maintaining separate audio tracks of the event, a POSA would have understood Strub’s reference to an “audio mixer” displaying multiple tracks as meaning either a special-purpose mixing device or a computer running conventional audio post-processing software, either of which would necessarily include the conventional, standard functionality of saving the displayed multi-track audio as a single file, and furthermore, would have considered such standard functionality to be obvious. Ex. 1002, ¶ 240.

To the extent Zaxcom contends that Strub does not disclose the additional limitations of Claim 15, those limitations are taught by Woo. Woo's system uses software and timecode information to "blend"—i.e., combine—two different recorded tracks from different microphones to generate a "time-synchronized composite recording"—i.e., a single data file comprising a multi-track combination of the first two recordings. Ex. 1004, 8:44-51 ("A step 114 combines the first and second recordings, according to a synchronization between the first and second date and time code information. A step 116 generates a third recording from the date and time synchronized portions of the first and second recordings, wherein the third recording presents an apparently time-seamless blend of the performance from a plurality of viewpoints."), 9:65-10:5 (combining first and second recordings to generate a third recording comprising a blend of the event from a "plurality of viewpoints"), 11:12-16 ("combining said first and second recording mediums...to create a time-synchronized composite recording."), 12:11-14, Fig. 4 (Step 114 ("Combine First and Second Recordings"), Step 116 ("Generate a Composite Third Recording")). The combining can be done either in post-processing or in real time. *Id.*, 8:51-54, 10:7-10, 10:12-14. A POSA would have understood Woo's description of generating a "time-synchronized composite recording" from two recordings of local audio data to mean that the local audio data is combined electronically to create the time-synchronized composite recording, and that the

composite recording is a single multi-track data file, and furthermore would have considered it obvious to save Woo's multi-track, composite recording as a single file. Ex. 1002, ¶ 241.

g. **Claim 17: “A system according to claim 1, wherein said at least one control unit is a digital signal processor.”**

Strub teaches that the control unit in the local audio device can be a digital signal processor (“DSP”) used, *e.g.*, to process the incoming audio signals for beam forming—*i.e.*, isolating the location of an audio source. Ex. 1003, 31:51-62. The digital signal processing functionality needed for beam forming can be performed, *e.g.*, by the system controller 301—a control unit—“operating in accordance with a computer program stored in the data storage device [305].” *Id.* 31:54-57, Fig. 3. Thus, the system controller 301 itself is a DSP. As another example, the local audio device can have “a separate processing device or devices, *e.g.*, one or more digital signal processors, to perform beam forming.” *Id.* 31:57-59. Ex. 1002, ¶ 242.

Woo's local audio device also includes a DSP 52. Ex. 1004, 7:54-58, Fig. 3; *see also id.* 8:60-63, 9:5-10, Claims 7-9, Figs. 5, 6 (DSPs 124, 144, 150). A POSA would have considered it a routine, obvious design choice to implement Woo's DSP 52 in software executed by Strub's system controller 301 or as a separate DSP in Strub's local audio device. *See* Ex. 1002, ¶ 243.

- h. **Claim 19: “A system according to claim 1, wherein said at least one local audio device is a body pack.”**

Strub’s local audio device can a body pack—*e.g.*, a backpack or other package worn on the recorder’s body. Ex. 1003, 11:11-17 (“[T]he recording unit [is] mounted on (e.g., attached on, or worn by)...the recorder”), 16:49-65 (device worn as backpack), 70:52-67, 71:53-66 (device attached to user’s body with waist strap), 73:24-50 (harness, backpack), Figs. 1, 4, 6, 8A-9B (depicting body packs); Ex. 1002, ¶ 244.

- i. **Claim 20: “A system according to claim 1, wherein said at least one local audio device receives said master timecodes via at least one of the group consisting of said local audio device receiver, said audio input port, said audio input device, and combinations thereof.”**

Each of Strub’s and Woo’s local audio devices receives the master timecodes via its local audio device receiver. *See supra* Element 1[C].

- j. **Claim 23: “A system according to claim 1, wherein said at least one local audio device receiver stores said master timecode in a buffer of said at least one local audio device receiver.”**

Strub’s local audio device has “a random access memory (RAM)...used to buffer data during recording”—*i.e.*, a buffer. Ex. 1003, 33:29-32. Thus, Strub’s non-volatile memory is a buffer. The data stored in the RAM—*i.e.*, the buffer—include “data...other than the recording data..., such as...data identifying the time at which the recording data was obtained...” *Id.* 33:39-42. A POSA would have

understood Strub's reference to "data identifying the time at which the recording data was obtained" to include the master timecodes and, furthermore, would have considered it obvious to include the master timecodes in the timing data stored in Strub's buffer. Ex. 1002, ¶ 246.

- k. **Claim 24: "A system according to claim 1, wherein said at least one local audio device transmits said local audio data in digital form."**

Strub's local audio device transmits the local audio data in digital form. For example, Strub states that "either analog or digital transmitters/receivers can be used," and that "digital transmitters...make[] it easier to broadcast other data...with the recording data." Ex. 1003, 37:53-67; Ex. 1002, ¶ 247.

- l. **Claim 25: "A system according to claim 1, wherein said at least one local audio device receiver wirelessly receives at least one of the group consisting of digital commands, said master timecodes, remotely generated audio, and combinations thereof."**

Strub's local audio device receiver wirelessly receives digital commands from Strub's control interface device. *See supra* Claim 2. Strub's and Woo's local audio device receivers wirelessly receive the master timecodes. *See supra* Element 1[C].

- m. **Claim 26: “A system according to claim 25, said system further comprising: at least one remote control unit having an RCU transmitter capable of wirelessly transmitting said at least one of the group consisting of said master timecodes, said digital commands, said remotely generated audio, and combinations thereof.”**

Strub’s “control interface device” comprises a remote control unit having an RCU transmitter that wirelessly transmits digital commands. *See supra* Claim 2. The GPS satellites in Strub and Woo wirelessly transmit the master timecodes. *See supra* Elements 1[A], 1[C]. A POSA would have considered it obvious to incorporate wireless transmission of master timecodes, as disclosed in Strub and Woo, into Strub’s control interface device. Ex. 1002, ¶ 249.

- n. **Claim 27: “A system according to claim 26, wherein said master timecode generator is integral to said remote control unit.”**

The GPS satellites in Strub and Woo generate the master timecodes. *See supra* Element 1[A]. A POSA would have considered it obvious to incorporate generation of the master timecodes, as disclosed in Strub and Woo, into Strub’s control interface device, particularly since generation of master timecodes was well known and conventional before the filing date of the ’443 Patent. Ex. 1002, ¶ 250.

B. Ground 2: Claims 4 and 9 are Rendered Obvious Under § 103 By the Combination of Strub, Woo, Nagai, Gleissner, and Winningstad

1. A POSA Would have Been Motivated to Combine Strub, Woo, Nagai, Gleissner, and Winningstad

A POSA would have been motivated to combine Strub, Woo, Nagai, and Gleissner. *See supra* § IX.A.1. In addition, A POSA would have been motivated to combine Winningstad with Strub, Woo, Nagai, and/or Gleissner. The teachings of Strub, Woo, Nagai, and Gleissner, and Winningstad provide substantial motivation to combine them. For example, the systems described in Strub, Woo, and Winningstad are the same type of apparatus used for the same purpose. Each discloses a system for receiving and recording local audio in a local device, wirelessly transmitting the same audio to a remote device, and recording the audio in the remote device. *See supra* § IX.A.1 (discussing Strub and Woo); Ex. 1008, Abstract, 2:36-39, 3:4-6, 4:63-5:4, 5:21-25, 5:65-67, 6:58-65, Figs. 3-5. In addition, each of the local audio devices of Strub, Woo, and Winningstad wirelessly receives master timecodes from a master timecode generator and uses the timing information from the master timecodes to stamp the local audio. *See supra* § IX.A.1 (discussing Strub and Woo); Ex. 1008, 8:17-22, 8:38-43, Fig. 5.

In addition, Woo provides motivations to use its synchronization methods in wireless recording systems, including (1) accurate synchronization, (2) generating

coordinated timecodes at independent sites, (3) simplicity of connection, (4) widely compatible SMPTE timecode format, and (5) a combination involving only familiar elements used according to known methods to improve the systems and yield predictable results. *See supra* § IX.A.1. Those same motivations equally apply to combining Woo with Winningstad. Ex. 1002, ¶ 302. Similarly, a POSA would have considered it obvious to use Nagai’s and Gleissner’s well-known standard connectors in Winningstad’s local audio device because of their popularity. *See supra* § IX.A.1; Ex. 1002, ¶ 302.

Furthermore, Winningstad provides express motivation for using its external interface port—which connects to a docking station—in audio recording systems such as those disclosed in Strub and Woo, including benefits such as allowing battery recharging and data downloading when connected to an external computer through a docking station. Ex. 1008, 5:17-20 (connecting to computer through docking station allows “battery recharging and data downloading”), 8:38-41.

Moreover, the ’443 Patent sought to solve the problem of matching the timing between multiple recordings produced by one or more wireless devices, and did so by generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp the locally recorded audio data. *Supra* § IX.A.1. Strub, Woo, and Winningstad recognized and solved that same problem in the same way.

See supra § IX.A.1 (discussing Strub and Woo); Ex. 1008, 8:17-22, 8:38-43, Fig. 5; *see also* 1002, ¶ 304; *KSR*, 550 U.S. at 417, 420-21; *Ball*, 555 F.3d at 993.

Furthermore, every element of Challenged Claims 4 and 9 appears in Strub, Woo, Nagai, Gleissner, and/or Winningstad. *See infra* § IX.B.2. Those elements are standard method steps using well-known, off-the-shelf audio-recording and radio components whose use would be familiar and predictable to any POSA. Ex. 1002, ¶ 305; *KSR*, 550 U.S. at 417. Furthermore, the technology and operation of such components was well-understood in the relevant time period such that the combination of Strub, Woo, Nagai, Gleissner, and Winningstad would have had a high likelihood of success. Ex. 1002, ¶ 305.

Thus, since Strub, Woo, and Winningstad teach the same kind of device used for the same purpose, since each of them identified the same problem identified in the '443 Patent and solved it in the same way, since the microphone jacks and plugs of Nagai and Gleissner and the external interface port of Winningstad were old elements performing the same function they had always been known to perform, since audio input ports in general have been known for over a century, since the combination of elements in the Challenged Claims is merely “the predictable use of prior art elements according to their established functions,” and since the combination of Strub, Woo, Nagai, Gleissner, and Winningstad would have had a

high likelihood of success, a POSA would have been motivated to combine Strub, Woo, Nagai, Gleissner, and Winningstad.

2. **The Combination of Strub, Woo, Nagai, Gleissner, and Winningstad Meets All Elements of Challenged Claims 4 and 9**

- a. **Claims 4 and 9: “A system according to claim [2/8], wherein said [at least one] remote control unit includes an external interface port for connection of said [at least one] remote control unit to an external interface selected from the group consisting of a personal computer, a dumb terminal, a recorder, a receiver, and combinations thereof.”**

Winningstad’s DD device 26 comprises a remote control unit having an RCU transmitter 96 capable of wirelessly transmitting commands to the receiver 82 of the acquisition circuitry 13, including commands to adjust the amount of MPEG data compression. Ex. 1008, 6:30-34 (“[T]he DD device 26 commands further compression, no compression, or first-time compression....”), Fig. 4. The DD device has an external interface port for connection of the DD device 26 to an external interface (e.g., a docking station) of a base station 44 or a central computer 52 at a headquarters 56. Winningstad 5:17-20 (“The base station 44 can also include a docketing [sic:docking] station that the DD device 26 seats into for battery recharging and data downloading....”), 8:38-41 (“[A] docking station may be provided at head quarters 56 or in the vehicle 42....”), FIG. 5. A POSA would have understood that, for the DD device 26 to dock with the base station 44 or the central

computer 52, the DD device 26 necessarily would have had an external interface port to connect to the docking station. Further, a POSA would have considered it obvious for the base station 44 or the central computer 52 to comprise a personal computer, a dumb terminal, a recorder, a receiver, or combination thereof. A POSA also would have considered it obvious to incorporate Winningstad's external docking station interface port in audio recording systems such as those disclosed in Strub and Woo because of the benefits taught by Winningstad, including battery recharging and data downloading. *Id.*, 5:17-20, 8:38-41; Ex. 1002, ¶ 307.

C. Ground 3: Claim 22 is Rendered Obvious Under § 103 By the Combination of Strub, Woo, Nagai, Gleissner and Dwyer

1. A POSA Would have Been Motivated to Combine Strub, Woo, Nagai, Gleissner and Dwyer

A POSA would have been motivated to combine Strub, Woo, Nagai, and Gleissner. *See supra* § IX.A.1. In addition, A POSA would have been motivated to combine Dwyer with Strub, Woo, Nagai, and/or Gleissner. The teachings of Strub, Woo, Nagai, and Gleissner, and Dwyer provide substantial motivation to combine them. For example, Dwyer explains that its technique of storing a timestamp in a header of an audio file is an improvement that makes it more convenient for users to manage, transfer, and identify audio files stored in a digital audio recording device. Ex. 1009, 1:20-39. A POSA would have recognized that Dwyer's improvement in audio data file management would equally benefit digital audio recording devices

such as those of Strub, Woo, Nagai, and Gleissner, and thus would have been motivated to incorporate Dwyer's audio file header into the recording systems of Strub, Woo, Nagai, and/or Gleissner. Ex. 1002, ¶ 308.

Moreover, the '443 Patent sought to solve the problem of matching the timing between multiple recordings produced by one or more wireless devices, and did so by generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp the locally recorded audio data. *Supra* § IX.A1. Strub and Woo recognized and solved that same problem in the same way. *See supra* § IX.A.1 (discussing Strub and Woo). Similarly, Dwyer's inclusion of a timestamp in the audio file header serves the same purpose by allowing more convenient and effective time-stamping of the audio data. *See* Ex. 1002, ¶ 309; *KSR*, 550 U.S. at 417, 420-21; *Ball*, 555 F.3d at 993.

Furthermore, every element of Challenged Claim 22 appears in Strub, Woo, Nagai, Gleissner, and/or Dwyer. *See infra* § IX.C.2. Those elements are standard method steps using well-known, off-the-shelf audio-recording and radio components that would be familiar to any POSA. Ex. 1002, ¶ 310. There is nothing unpredictable about the claimed use of those components in a wireless audio-recording system. *Id.*; *see KSR*, 550 U.S. at 417. Furthermore, the technology and operation of such components was well-understood in the relevant time period such

that the combination of Strub, Woo, Nagai, Gleissner, and Dwyer would have had a high likelihood of success. Ex. 1002, ¶ 310.

Thus, since Strub, Woo, and Winningstad teach the same kind of device used for the same purpose, since each of them identified the same problem identified in the '443 Patent and solved it in the same way, since the microphone jacks and plugs of Nagai and Gleissner and the time-stamp in Dwyer's file header were old elements performing the same function they had always been known to perform, since audio input ports in general have been known for over a century, since the combination of elements in the Challenged Claims is nothing more than "the predictable use of prior art elements according to their established functions," and since the combination of Strub, Woo, Nagai, Gleissner, and Winningstad would have had a high likelihood of success, a POSA would have been motivated to combine Strub, Woo, Nagai, Gleissner, and Dwyer. See Ex. 1002, ¶ 311.

2. **The Combination of Strub, Woo, Nagai, Gleissner, and Dwyer Meets All Elements of Challenged Claim 22**

a. **Claim 22.**

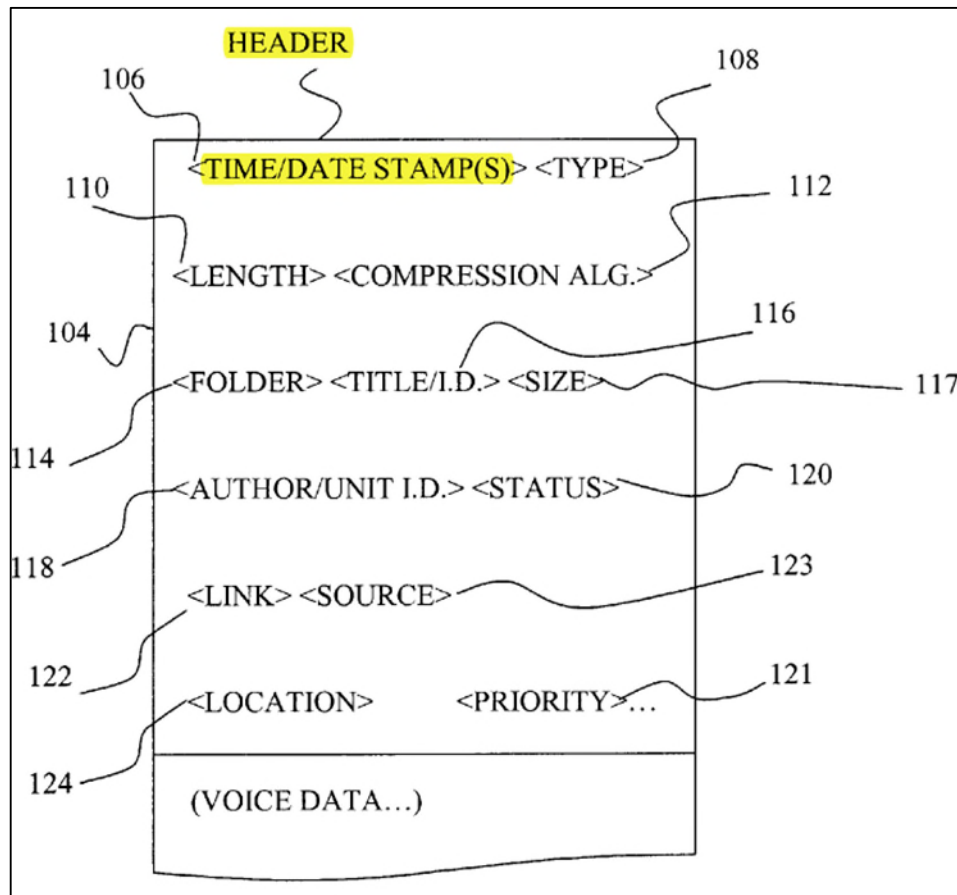
(1) **22[A]: "A system according to claim 1, wherein said local audio data is stored in said at least one memory as an audio file; and**

The local audio data in Strub and Woo is stored in the local memory as an audio file. See *supra* Element 1[F]. Similarly, Dwyer's audio device stores local audio data in a memory 64 as an audio file. Ex. 1009, Title, Abstract ("A portable

audio recorder stores voice information files in the form of digital data. Header data is associated with each voice information file.”), 1:39-46 (“storing a voice data file in a memory device included in the portable digital recorder”), 4:52-54 (memory card 64 “for storing voice files and associated header data”), Fig. 3; *see* Ex. 1002, ¶¶ 312.

(2) **22[B]: “wherein said first timestamp is implemented via storage of data of said master timecode in a header of said audio file.”**

Dwyer teaches a first timestamp implemented via storage of data of a master timecode in a header of an audio file. For example, the audio file stored in Dwyer’s memory 64 has a header 104 which includes “one or more time and date stamps 106 (corresponding to a time or times at which the voice file was originally recorded or additional voice information was added to the file)....” *Id.* 6:33-38; *see also id.* 1:45-57, 2:20-40, 4:52-54, 6:23-32 (“[T]he...voice data file and the corresponding header data are...stored in memory...64....”). The header 104 is depicted in Fig. 5:



Id. Fig. 5 (annotated).

A POSA would have been motivated to base Dwyer's time stamp on the master timecode disclosed in Strub and/or Woo in order to gain Dwyer's benefit of improved audio data file management. *Id.*; see also Ex. 1009, 1:36-39.

D. No Relevant Secondary Considerations or Objective Indicia

Petitioner is not aware of any secondary considerations or objective indicia of nonobviousness which would impact the obviousness analysis of Grounds 1-3. For example, Zaxcom is estopped from relying on (1) any of the evidence of objective

indicia on which it relied in the Lectrosonics IPRs, or (2) any substantially similar evidence. *See supra*, § VI.C.2.

X. DISCRETIONARY DENIAL IS NOT WARRANTED

A. Section 325 (d)

Institution denial based on 35 U.S.C. §325(d) is unwarranted because the arguments and evidence presented here were not previously and/or properly considered. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”), *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17-18 (PTAB Dec. 15, 2017) (precedential as to §III.C.5, first paragraph).

1. Advanced Bionics Part One

Strub, Woo, Nagai, and Gleissner, Winningstad, and Dyer neither were before the Examiner nor are “substantially the same” as the prior art considered by the Examiner. *Advanced Bionics*, Paper 6 at 13-19. The only references that the Examiner considered substantively were U.S. Patent Pub. No. 2001/0034214 (“Koike”), U.S. Patent Pub. No. 2002/0026256 (“Hilton”), U.S. Patent 5,668,884 (“Clair”), and several instruction manuals (“Nagra/Kudelski” and “Black Box Video”). *See* Ex. 1036 at 5-18, 23-43, 49-67. The Examiner never asserted, *e.g.*, that any of the references before the USPTO during prosecution discloses a local audio device wearable by a creator of said locally generated audio, as in Strub and

Winningstad. *Id.*; *see also supra* Ground 1, Element 1[B]. Nor is that limitation present in any of the references considered by the examiner.

2. **Advanced Bionics Part Two**

Since Strub, Woo, Nagai, and Gleissner, Winningstad, and Dyer were not before the USPTO during prosecution of the '443 Patent and are not substantially the same as the art that was before the USPTO, Petitioner's arguments presented herein cannot be the same or substantially the same as those previously presented during prosecution.

Strub, Woo, Nagai, and Gleissner were considered by the PTAB in the Lectrosonics IPRs, but the Board found claims similar to the present Challenged Claims unpatentable over those references. *See Supra* § VI.C. In contrast, the only claims **not** found unpatentable in the Lectrosonics IPRs included the limitation "replacing...[remote/remotely recorded] audio data with...local audio data." Ex. 1014, 64 (Claims 1-14 unpatentable over Strub, Nagai, and Gleissner and replaced by substitute Claims 15-28); Ex. 1015, IPR Certificate, 1:30-31, 2:28-30; Ex. 1017 at 73 (Claims 7, 8, 11, 12, 14, and 15 unpatentable over Strub, Nagai, Gleissner, and Woo and replaced by substitute Claims 21-26); Ex. 1030, IPR Certificate, 1:41-43, 2:32-33; Ex. 1018 at 6 n.6, 63 (Claims 1-4, 9, 10, 12, 15, 31, 36, 37, and 41-44 unpatentable over Strub, Nagai, Gleissner, and Woo; Claim 45 (reciting storage of timecode-associated data in file header) unpatentable over those references plus

Dwyer (U.S. Pat. 6,571,211); replaced by substitute Claims 50-65); Ex. 1028, IPR Certificate, 1:41-43). That limitation does not appear in any Challenged Claim in the present case.

Thus, since the USPTO’s only substantive consideration of any of the presently presented prior art resulted in unpatentability and cancelation of claims similar to the Challenged Claims, this factor weighs strongly against discretionary denial.

B. Section 314(a)

Under the Director’s Interim Procedure for Discretionary Denials (June 21, 2022) (“IP”), “the PTAB will not deny institution based on *Fintiv* if there is compelling evidence of unpatentability” (IP, 5), which this Petition provides. The *Fintiv* factors favor institution based on efficiency, fairness, and patent quality. *Apple v. Fintiv*, IPR2020-00019, Paper 11 at 5 (Mar. 20, 2020) (“*Fintiv*”) (precedential).

1. Stay Potential

Petitioner intends to seek a stay of the district court litigation, but without “specific evidence” how the court will rule, this factor is neutral. *Sand Revolution II v. Continental Intermodal Group–Trucking*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative).

2. **Trial Timing and Diligence**

Institution approximately six months from Petition filing would result in an FWD by June 2026. The district court in the Delaware Litigation has not set a trial date, but the final summary judgment and Daubert briefs are not due until April 10, 2026. Ex. 1031, 3. Thus, it is extremely unlikely that trial will start in or before June 2026. Rather, the Court probably will not even issue its summary judgment and Daubert rulings, let alone start the trial, until June 2026 or later. Trial will not occur until substantially after the FWD.

Furthermore, Petitioner plans to seek a stay of the Delaware Litigation during the pendency of this IPR, which is likely to be granted, pushing the trial date back even further after the FWD, as the District of Delaware has historically granted requests to stay pending IPR that were filed after the institution decision. See *Ethicon LLC v. Intuitive Surgical, Inc.*, No. 17-871-LPS, 2019 WL 1276029, at *1-3 (D. Del. Mar. 20, 2019); *Bio-Rad Labs. Inc. v. 10X Genomics, Inc.*, No. 18-1679-RGA, 2020 WL 2849989, at *1-2 (D. Del. June 2, 2020); *NEC Corp. v. Peloton Interactive, Inc.*, No. 22-987-CJB, 2024 WL 1533952, at *1-3 (D. Del. Apr. 9, 2024). Thus, Factor 2 weighs against discretionary denial. *Fintiv*, at 9.

3. **Litigation Investment**

In the Delaware Litigation, fact discovery does not end until August 2025, claim construction and expert discovery have not even begun, Ex. 1031 at 3, a trial

date has not been set, *id.*, and no substantive orders have been issued related to the patents-in-suit. Thus, this factor weighs against discretionary denial. *Fintiv*, at 9-10.

4. **Issue Overlap**

Although all of the Challenged Claims are currently being asserted in the Delaware Litigation, that is at least partly because Zaxcom is asserting 140 claims and has refused to narrow its list of claims at this time. Ex. 1032 . The Court recently issued a revised scheduling order which requires Zaxcom to reduce its asserted claims before the *Markman* proceeding and after the *Markman* ruling. In addition, Petitioner is concurrently filing IPR Petitions on the '902 and '207 Patents. Collectively, the three related IPR Petitions challenge a total of 38 claims, which is itself too many to present to a jury, and there are four other patents-in-suit not subject to today's IPR Petitions. Thus, it is highly likely that many of the Challenged Claims will not be asserted in the Delaware Litigation. This weighs against discretionary denial, because “[t]he IPR trial will impact the integrity of the patent system positively by considering material issues not raised in the District Court Action.” *Seven Networks*, Paper 10 at 17, 19; *Fintiv*, at 12-13.

5. **Litigation Parties**

This Petition involves the same parties as the Delaware Litigation, so this factor may “depend[] on which tribunal was likely to address the challenged patent

first,” which is the PTAB (*supra* § X.B.2). *Google v. Parus Holdings*, IPR2020-00846, Paper 9 at 20-21 (PTAB Oct. 21, 2020). In this instance, the PTAB will address the challenged patent first since the FWD will issue before the Delaware trial. Ex. 1031, 3.

6. **Merits**

The “strong showing on the merits” presented here weighs against denial. *Seven Networks*, Paper 10 at 20.

XI. CONCLUSION

For the foregoing reasons, Petitioner requests institution of IPR and cancellation of all the Challenged Claims.

XII. PAYMENT OF FEES

Petitioner submits concurrently herewith the required fees under 37 C.F.R. §§ 42.15(a) and 42.103(a). The Office is authorized to charge any shortfall or other fees due during this proceeding to Deposit Account No. 50-2778.

Dated: December 4, 2024

/ Michael A. Fisher /
Jeffrey B. Plies, reg. no. 46,999
Michael A. Fisher, reg. no. 42,536
DECHERT LLP
Counsel for Petitioner

WORD COUNT CERTIFICATION

Pursuant to 37 C.F.R. § 42.24(d), I certify that this Petition contains 13,999 words (excluding the title page, table of contents, table of authorities, table of exhibits, mandatory notices, this certificate, the claim listing, and the certificate of service), as determined by Microsoft Word.

Dated: December 4, 2024

/ Michael A. Fisher /

Michael A. Fisher, Reg. No. 42,536

DECHERT LLP

Counsel for Petitioner

CHALLENGED CLAIM LISTING

Claim 1
1[Pre]: A system for recording locally generated audio comprising:
1[A]: at least one master timecode generator for generating a plurality of master timecodes; and
1[B]: at least one local audio device wearable by a creator of said locally generated audio including:
1[C]: at least one local audio device receiver for wirelessly receiving said master timecodes;
1[D]: at least one audio input port for receiving locally generated audio from an audio input device;
1[E]: at least one memory;
1[F]: at least one control unit in communication with said local audio device receiver, said audio input device, and said memory for creating local audio data from said locally generated audio and storing said local audio data in said memory; and
1[G]: at least one local audio device wireless transmitter for wirelessly transmitting said local audio data in real time, said at least one local audio device wireless transmitter in communication with said at least one control unit;
1[H]: wherein said local audio data includes stamped local audio data and unstamped local audio data;
1[I]: wherein said stamped local audio data includes at least one timestamp to reference at least a portion of said local audio data to at least one of said master timecodes; and
1[J]: wherein said unstamped local audio data does not include a reference to said master timecodes.

Claim 2

A system according to claim 1, said system further comprising: at least one remote control unit having an RCU transmitter capable of transmitting digital commands; wherein said remote control unit controls at least one function of said at least one local audio device via transmission of at least one of said digital commands.

Claim 3

A system according to claim 2, wherein said at least one function includes at least one of the group consisting of playing of said locally generated audio data from said memory, enabling and disabling recording by said at least one local audio device, adjusting a transmitter frequency of said at least one local audio device, adjusting a frequency of said at least one local audio device receiver, enabling and disabling said at least one local audio device wireless transmitter of said at least one local audio device, adjusting a gain of said at least one audio input port, adjusting a high pass filter of said at least one local audio device, selecting record mode of said at least one local audio device, entering at least one master timecode value, storing data in protected areas of said at least one memory, requesting status of said at least one local audio device, and combinations thereof.

Claim 4

A system according to claim 2, wherein said at least one remote control unit includes an external interface port for connection of said at least one remote control unit to an external interface selected from the group consisting of a personal computer, a dumb terminal, a recorder, a receiver, and combinations thereof.

Claim 7

7[A]: A system according to claim 1, said system further comprising: at least one of the group consisting of a recorder, a receiver, and combinations thereof, said at least one of the group consisting of said recorder, said receiver, and combinations thereof coupled wirelessly to said at least one local audio device;

7[B]: wherein said at least one local audio device transmits said local audio data to said at least one of the group consisting of said recorder, said receiver, and

combinations thereof wirelessly via said at least one local audio device wireless transmitter.

Claim 8

A system according to claim 7, said system further comprising: at least one remote control unit having an RCU transmitter capable of transmitting digital commands; wherein said remote control unit controls at least one function of at least one of the group consisting of said at least one local audio device, said receiver, said recorder, and combinations thereof via transmission of at least one of said digital commands.

Claim 9

A system according to claim 8 wherein said remote control unit includes an external interface port for connection of said remote control unit to an external interface selected from the group consisting of a personal computer, a dumb terminal, a recorder, a receiver, and combinations thereof.

Claim 15

A system according to claim 1, wherein said local audio data is combined electronically to create a single multi-track data file.

Claim 17

A system according to claim 1, wherein said at least one control unit is a digital signal processor.

Claim 19

A system according to claim 1, wherein said at least one local audio device is a body pack.

Claim 20

A system according to claim 1, wherein said at least one local audio device receives said master timecodes via at least one of the group consisting of said local audio device receiver, said audio input port, said audio input device, and combinations thereof.

Claim 22

22[A]: A system according to claim 1, wherein said local audio data is stored in said at least one memory as an audio file; and

22[B]: wherein said first timestamp is implemented via storage of data of said master timecode in a header of said audio file.

Claim 23

A system according to claim 1, wherein said at least one local audio device receiver stores said master timecode in a buffer of said at least one local audio device receiver.

Claim 24

A system according to claim 1, wherein said at least one local audio device transmits said local audio data in digital form.

Claim 25

A system according to claim 1, wherein said at least one local audio device receiver wirelessly receives at least one of the group consisting of digital commands, said master timecodes, remotely generated audio, and combinations thereof.

Claim 26

A system according to claim 25, said system further comprising: at least one remote control unit having an RCU transmitter capable of wirelessly transmitting said at least one of the group consisting of said master timecodes, said digital commands, said remotely generated audio, and combinations thereof.

Claim 27

A system according to claim 26, wherein said master timecode generator is integral to said remote control unit.

CERTIFICATE OF SERVICE

I certify that today in:

RØDE Microphones, LLC., et al. v. Zaxcom, Inc., IPR2025-00230 (U.S. Patent 7,711,443)

I caused to be served a copy of:

Petition

Power of Attorney

Exhibits 1001-1006, 1008-1009, 1014-1021, 10123-1028, 1030-1032, 1036

upon:

ZAXCOM INC., c/o:

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via:

Electronic Mail

Patent Owner agreed to have the above-listed counsel accept electronic service

of the Petition on November 20, 2024. *See* 37 CFR § 42.105(b) (“Upon agreement of the parties, service may be made electronically....”).

Dated: December 4, 2024

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Exhibit E

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RØDE MICROPHONES, LLC AND
FREEDMAN ELECTRONICS PTY LTD,
Petitioners

v.

ZAXCOM, INC.,
Patent Owner.

IPR2025-00231

Patent 7,929,902

PETITION FOR INTER PARTES REVIEW

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Exhibit No.	Description
1001	United States Patent 7,929,902
1002	Declaration of Professor Chris Kyriakakis
1003	United States Patent No. 6,825,875 (“Strub”)
1004	United States Patent No. 5,479,351 (“Woo”)
1005	United States Publication No. 2002/0159179 (“Nagai”)
1006	United States Patent Publication No. 2004/0028241 (“Gleissner”)
1007	[Reserved]
1008	United States Patent No. 7,483,485 (“Winningstad”)
1009	[Reserved]
1010	U.S. Patent No. 7,493,437 (“Jones”)
1011	[Reserved]
1012	[Reserved]
1013	[Reserved]
1014	IPR2018-00972 Paper 41 November 7, 2019 Final Written Decision
1015	United States Patent 9,336,307
1016	IPR2018-00972 Petition for Inter Partes Review
1017	IPR2018-01129 Paper 33 January 24, 2020 Final Written Decision

Exhibit No.	Description
1018	IPR2018-01130 Paper 32 January 24, 2020 Final Written Decision
1019	IPR2018-00972 Zaxcom, Inc's Patent Owner Response
1020	IPR2018-01129 Zaxcom, Inc's Patent Owner Response
1021	IPR2018-01130 Zaxcom, Inc's Patent Owner Response
1022	[Reserved]
1023	United States Patent No 489,570
1024	Apple Be Damned: The Humble Headphone Jack Has Survived For More Than A Century by Jonathan Ore. Published September 10, 2016.
1025	IEC 61076-2-103:2004
1026	Wayback Machine Archived Copy of Sanken Catalogue
1027	Wayback Machine archived copy of Sanken Webpage
1028	United States Patent 8,385,814
1029	[Reserved]
1030	[Reserved]
1031	November 13, 2024 Doc. 98 Order Revising Schedule in <i>Zaxcom, Inc. v. Rode Microphones, LLC and Freedman Electronics PTY Ltd.</i>
1032	October 28, 2024 Letter from Zaxcom counsel responding to RØDE's request to reduce number of asserted claims
1033	Avid Media Composer Editing Guide Release 9.0
1034	Short/cut Personal Audio Editor 2000 Owner's Manual

Exhibit No.	Description
1035	United States Patent 7,929,902 Prosecution History Excerpts

X

MANDATORY NOTICES UNDER 37 C.F.R. §42.8

Pursuant to 37 C.F.R. §42.8, Petitioner states as follows:

A. Real Parties-in-Interest (37 C.F.R. §42.8(b)(1))

The real parties-in-interest are RØDE Microphones, LLC and Freedman Electronics Pty Ltd.

B. Related Matters (37 C.F.R. §42.8(b)(2))**1. U.S. District Court for the District of Delaware**

The following pending district court litigation may affect or be affected by this proceeding: *Zaxcom, Inc. v. RODE Microphones, LLC, et al.*, No. 1:23-cv-01245-JFM (D. Del.), filed October 31, 2023 (“the Delaware Litigation”). Petitioner RØDE Microphones, LLC was served with the original Complaint on December 4, 2023. Petitioner Freedman Electronics Pty Ltd was served with the original Complaint on April 12, 2024. On November 14, 2024, Zaxcom filed an Amended Complaint which alleges, among other things, that Petitioner has infringed certain claims of U.S. Patent No. 7,929,902 (“the ’902 Patent”) and six other patents: U.S. Patent Nos. 7,711,443 (“the ’443 Patent”), 8,385,814 (“the ’814 Patent”), 9,336,307 (“the ’307 Patent”), 10,276,207 (“the ’207 Patent”), 11,610,605 (“the ’605 Patent”), and 12,051,444 (“the ’444 Patent”) (collectively, the “Delaware Patents-in-Suit”). The Delaware patents-in-suit are all related to each other through a chain of continuation and continuation-in-part applications.

2. Patent Trial and Appeal Board—Co-Pending Matters

Concurrently with the present Petition, Petitioner is filing *Inter Partes* Review (“IPR”) Petitions challenging the patentability of certain claims of the ’443 and ’207 Patents. Those IPRs may affect indirectly or may be affected indirectly by the decision in this proceeding since all three patents are related and are involved in the Delaware Litigation.

3. Patent Trial and Appeal Board—Past Matters

The related ’902, ’814, and ’307 Patents were previously involved in the following IPRs filed by third party Lectrosonics:

- ’902 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129 (“the ’1129 IPR”);
- ’814 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01130 (“the ’1130 IPR”); and
- ’307 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-00972 (“the ’972 IPR”)

(collectively, “the Lectrosonics IPRs”).

Since the presently challenged claims of the ’902 Patent share many elements with claims of the ’902 Patent and the related ’814, and ’307 Patents that the PTAB previously found unpatentable in the Lectrosonics IPRs, and since the Lectrosonics

IPRs were based on several of the same prior-art references relied on here, the Lectrosonics IPRs may affect the decision in this proceeding.

C. Lead and Backup Counsel and Service Information (37 C.F.R. §§42.8(b)(3) and (b)(4))

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I. INTRODUCTION

RØDE Microphones, LLC and Freedman Electronics Pty Ltd (collectively “RØDE” or “Petitioner”) requests IPR and cancellation of Claims 1-6, 9-10, 13, and 16-20 (the “Challenged Claims”) of the ’902 Patent (Ex. 1001). IPR of the Challenged Claims should be instituted and the claims found unpatentable.

II. CERTIFICATION OF GROUNDS FOR STANDING UNDER 37 C.F.R. § 42.104(a)

Petitioner certifies that the ’902 Patent is available for IPR and Petitioner is not barred or estopped from requesting IPR of the Challenged Claims.

III. IDENTIFICATION OF RELIEF REQUESTED AND GROUNDS FOR CHALLENGE UNDER 37 C.F.R. §§ 42.22(a)(1) AND 42.104(b)

Petitioner requests review and cancellation of Claims 1-6, 9-10, 13, and 16-20 of the ’902 Patent on the following grounds:

Ground	Claims	Basis	Prior Art
1	1-3, 6, 13, 16	35 U.S.C. § 103	U.S. Patent No. 6,825,875 (“Strub”) (Ex. 1003), U.S. Patent No. 5,479,351 (“Woo”) (Ex. 1004), U.S. Patent Pub. No. 2002/0159179 (“Nagai”) (Ex. 1005), and U.S. Patent Pub. No. 2004/0028241 (“Gleissner”) (Ex. 1006)

2	4, 5, 9, 10	35 U.S.C. § 103	Strub, Woo, Nagai, Gleissner, and U.S. Patent No. 7,493,437 ("Jones") (Ex. 1010)
3	17-20	35 U.S.C. § 103	Strub and Woo

For purposes of the district court litigation, Petitioner reserves the right to argue that one or more of the terms in the claims of the '207 Patent are indefinite or require construction. Furthermore, Petitioner's reading of the respective claim terms is based on Zaxcom's reading of those terms in the Delaware Litigation, including Zaxcom's application of the claim terms in its infringement contentions in that litigation.

IV. BACKGROUND OF THE TECHNOLOGY

The '902 Patent describes a system for recording locally generated audio in a wearable local device and wirelessly transmitting the same audio to a remote device. Ex. 1001, 1:26-58. The alleged invention of the '902 Patent is that the local device stores (*i.e.*, records) local audio data, receives a master timecode from a master timecode generator, and stamps the stored (*i.e.*, recorded) audio data with a timestamp referencing at least a portion of the local audio data to the master timecode. *Id.* 3:53-56, 4:14-23, 4:62-5:19, 10:5-41, 11:63-67, 14:9-24, 14:55-59, 15:63-16:1, 16:30-37, 23:55-57, 25:3-6, 26:27-28, 27:25-27, Figs. 4A, 4B, 5, 6.

This purported innovation was not new, but existed in the prior art. For example, without limitation, Strub and Woo both teach local devices which receive a master timecode from a master timecode generator and stamp local audio data with a timestamp referencing at least a portion of the local audio data to the master timecode. *See, e.g.*, Ex. 1003, 62:26-63:50 (receiving GPS “current time that can be used as a clock to generate time-stamps”), 75:25-57; Ex. 1004, Abstract (“GPS receiver...communicat[es] time code information...to create tracks on each recording for re-synchronizing”), 1:60-2:9 (timecodes), 2:39-48, 3:3-24, 4:3-32, 5:5-67 (master timecodes to “date and time tag[]” recordings), 7:26-50, 8:60-9:4, 9:56-62, 10:15-64, Fig. 3 (element 43), Figs. 1, 4-6; Ex. 1002, ¶ 39.

V. PERSON OF ORDINARY SKILL IN THE ART

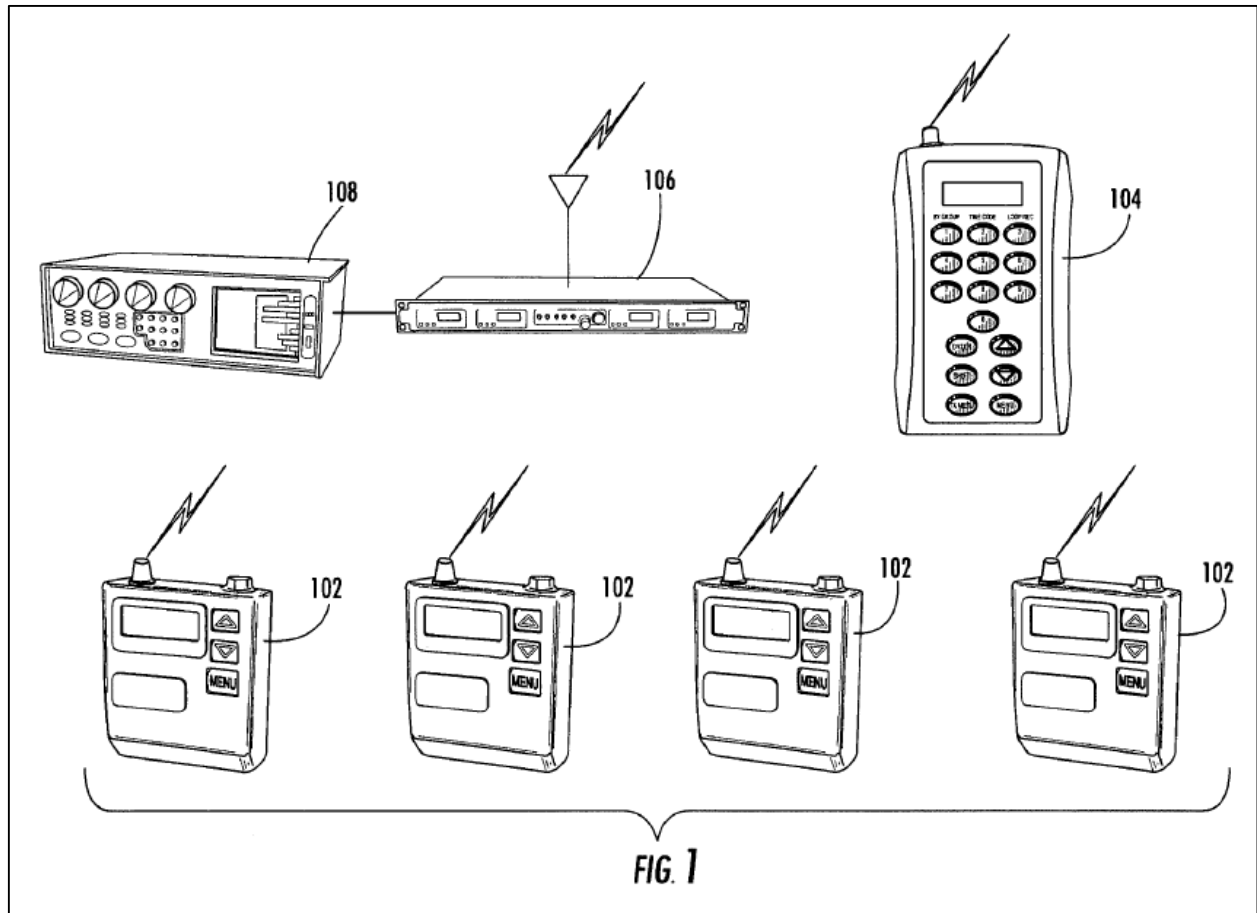
A person of ordinary skill in the art (“POSA”) as of the claimed priority date would have had at least a Bachelor’s degree in electrical engineering or a related or equivalent field, and two or more years of experience working with audio systems. However, additional years of education in the above-referenced fields may compensate for fewer years of experience. Ex. 1002, ¶ 40.

VI. THE ’902 PATENT

A. Summary of the Specification

The ’902 Patent describes a recording system 100 which wirelessly records audio performances by one or more performers. Ex. 1001, 4:12-14, Fig. 1. The

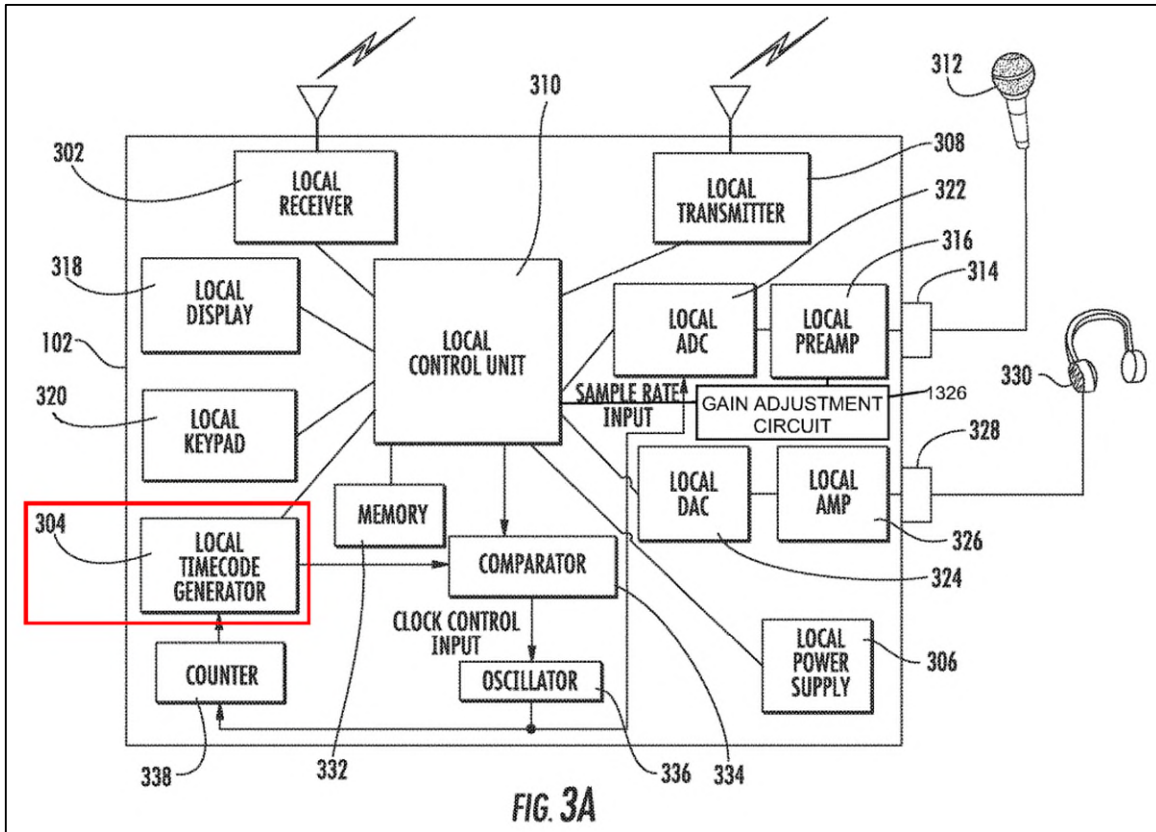
system 100 includes one or more wearable local audio devices 102, a remote receiver 106, a remote recorder 108 connected to the receiver, and a remote-control unit (“RCU”) capable of transmitting a time reference signal, digital commands, and/or audio to the other component, as depicted in Fig. 1:



See *id.* 4:37-43, 23:40-41, 24:55-56, 26:1-2, 27:9-10, Figs. 1, 3A, 3B. The local audio devices 102 record audio from the respective performers and transmit both live and replayed audio wirelessly to the remote receiver 106. *Id.* 4:50-56. The audio received by the receiver 106 is recorded by the recorder 108. *Id.* 4:56-59.

The components of the system 100 are synchronized to timestamp their recorded audio. *Id.* 4:14-23. The timestamps allow the system to combine individual audio tracks into multi-track audio files, correct for lost audio data, and/or synchronize tracks in post-processing. *Id.* 4:23-36, 4:62-5:19.

To synchronize its devices, the system can include a master timecode generator, which can be, *e.g.*, integral to the RCU 104 or the recorder 108. *Id.* 10:56-62. The master timecode generator generates master timecodes and sends them wirelessly to the local audio devices 102. *Id.* 16:30-32, Fig. 6 (step 604). Each local audio device 102 can also have its own local timecode generator 304, as illustrated in Fig. 3A:



See *id.* 6:11-15, Fig. 3A.

B. Claims

The '902 Patent has 26 claims, of which Claims 1, 7, 12, and 17 are independent. Each Challenged Claim refers to a local audio device which receives locally generated audio, wirelessly transmits the audio to a remote device, stores the audio in a memory, and, other than claim 16, stamps the audio with a timecode generated by a master timecode generator. The '902 Patent acknowledges that all of those features were known in the prior art, since they are described in the patent's Background section. *Id.* 1:26-32 (invention relates to “**recording** and processing audio received from one or more **wireless devices**”), 1:40-48 (Received audio “is

*timestamped with a time reference signal such as a...('SMPTE') timecode signal....”), 1:49-58 (“[The] **wireless transmitters** may take the form of **body packs that are worn by each performer**. Typically, the audio receiver receives each performer's audio from the performer’s respective body pack via an analog or digital wireless transmission and transmits it to the audio recorder.”). A number of the challenged dependent claims add features that also appear in the Background section of the '902 Patent and thus constitute admitted prior art.¹ For example:*

Claim(s)	Feature	Location in '902 Background
6, 13, 17	timecodes include time data, frame data, type, recorder transport status, name of scene, name of take, or track identifier	1:40-45 (“[T]he received audio and/or the multitrack audio is timestamped with a [SMPTE] timecode signal containing

¹ See *Nichia Corp. v. Emcore Corp.*, Case IPR2012-00005, Paper 68 at 20 (P.T.A.B. Feb. 11, 2014) (“Admitted Prior Art includes the background section of the...provisional application...and the background section of the...patent...”); *In re Metz*, 173 F.3d 433, at *1 (Fed. Cir. 1998) (“The admitted prior art apparatus is set forth...in the ‘Background of the Invention’”); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1303 (Fed. Cir. 2016) (admitted prior art in background section); *In re Battiston*, 139 Fed.Appx. 281, 282 (Fed. Cir. 2005) (referring to “the Admitted Prior Art...in the ‘Background of the Invention’ section of [patent] application”).

		information regarding the hour, minute, second,...”)
7	A local timecode is stored with the audio data.	1:40-46 (audio data “timestamped” with SMPTE timecode)

Additional limitations of the Challenged Claims include, without limitation:

- Claim 2: The audio data includes one or more track identifiers, local audio device identifiers, or performer identifiers.
- Claim 3, 18: The control unit is operable to receive commands remotely from a wireless remote control unit.
- Claim 4, 9: A multi-memory unit.
- Claim 4, 5, 9, 10, 16, 19, 20: Manipulating local audio data.
- Claim 5, 10, 16, 20: Manipulating the local audio data using commercially available software.

C. [Reserved]

D. Lectrosonics IPRs

1. Collateral Estoppel Based on PTAB’s Findings Regarding Claim Elements in Prior Art and Obviousness of Combinations

In the Lectrosonics IPRs, the PTAB made numerous findings regarding the presence of claim elements in Strub, Woo, Nagai, and Gleissner, and regarding the obviousness of combining those references. Zaxcom is collaterally estopped from disputing those findings.

Collateral estoppel, also known as issue preclusion, precludes a party from relitigating an issue if: “(1) the issue is identical to one decided in the first action; (2) the issue was actually litigated in the first action; (3) resolution of the issue was essential to a final judgment in the first action; and (4) [the party against whom collateral estoppel is being asserted] had a full and fair opportunity to litigate the issue in the first action.” *Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1381 (Fed. Cir. 2022) (citation omitted). “It is well established that collateral estoppel applies to IPR proceedings.” *Id.* (citing *Papst Licensing GMBH & Co. KG v. Samsung Elecs., Am.*, 924 F.3d 1243, 1251 (Fed. Cir. 2019)). Furthermore, “[i]t is well established that patent claims need not be identical for collateral estoppel to apply....Rather, collateral estoppel requires that the *issues of patentability* be identical....Thus, collateral estoppel may apply even if the patent claims ‘use slightly different language to describe substantially the same invention,’ so long as ‘the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity.’” *Google v. Hammond*, 54 F.4th at 1381 (emphasis in original); *see also Google LLC v. Parus Holdings, Inc.*, IPR2022-00279, Paper 16 at 17-21 (P.T.A.B. Sept. 18, 2023) (finding collateral estoppel where claim limitations were not identical, but were sufficiently similar that the *issues* were identical); *Papst*, 924 F.3d at 1250-53 (Fed. Cir. 2019) (applying issue preclusion to claim construction and application of a claim limitation to a prior-

art reference based on prior PTAB decision); *see also United States v. Utah Constr. & Mining Co.*, 384 U.S. 394, 421-22 (1966) (collateral estoppel can arise from an administrative decision).

In the '972 IPR, the PTAB found Claims 12-14 of the '307 Patent anticipated by Strub. Ex. 1014 at 25-26. In doing so, the Board necessarily found all elements of those claims present in Strub, including the following:

- locally receiving local audio generated by at least one performer during an audio event;
- locally recording the local audio as local audio data in at least one memory of at least one local audio device wearable by a creator of said local audio;
- locally receiving or generating master time data including at least one of the group consisting of hour data, minute data, second data, and combinations thereof;
- at least one of a group consisting of...adding a local audio device identifier to at least a portion of said memory,...and adding said performer identifier to at least a portion of said local audio data; and
- wirelessly transmitting the locally generated audio to a remote recorder;
- remotely recording the locally generated audio by the remote recorder as remotely recorded audio data.

See Ex. 1015 Claims 12-14; Ex. 1016 at 48 (relying on Strub for “local audio device identifier” and “performer identifier” limitations); *see also* Ex. 1014 at 21-22 (finding that Strub discloses “a local audio device that records local audio and transmits the local audio to other remote devices” and “that the same local audio is stored at both the wearable local audio device as local audio data and the remote receiver/recorder as remotely recorded audio data”), 22 (“We...agree with Petitioner that Strub’s device is ‘wearable.’”);

Further in the ’972 IPR, the PTAB found Claim 1 of the ’307 Patent obvious over Strub combined with Nagai or Gleissner. Ex. 1014 at 19, 25. In making that determination, the PTAB necessarily found that Strub, Nagai and/or Gleissner teach “at least one audio input port for receiving said locally generated audio from an audio input device,” and that it would have been obvious to combine Strub with Nagai or Gleissner. *Id.* 16-19.

In the ’1129 and ’1130 IPRs, the Board made similar findings regarding (1) the presence of the above-referenced limitations in Strub, Nagai, and Gleissner, and (2) the obviousness of combining those three references. *See, e.g.*, Ex. 1017 at 25 (Strub’s device wearable), 35 (finding ’902 Claims 7, 8, and 11 obvious over Strub in combination with Nagai or Gleissner, and Woo), 40 (Strub teaches a local audio device that records local audio and transmits the same local audio to a remote device), 41 (’902 Claims 12, 14, and 15 anticipated by Strub); Ex. 1018 at 22 (Strub’s

device wearable), 32 (numerous '902 Claims obvious over Strub in combination with Nagai or Gleissner, and Woo). The Board also found that Strub discloses “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory,” that Woo discloses a “master timecode generator for generating a plurality of master timecodes” “just as disclosed by the [related '902] patent,” and that a POSA would have been motivated to use Woo’s synchronization techniques Strub’s system. Ex. 1017 at 25-31; Ex. 1018 at 22-28.

Zaxcom appealed the Board’s decisions in all three of the Lectrosonics IPRs. In each case, the Federal Circuit affirmed the decision in its entirety. *Zaxcom, Inc. v. Lectrosonics, Inc.*, Nos. 2020-1350, 2020-1405, 2022 WL 499843, at *1-2 (Fed. Cir. Feb. 18, 2022); *Zaxcom, Inc. v. Lectrosonics, Inc.*, Nos. 2020-1921, 2020-1922, 2020-1943, 2020-1944, 2022 WL 499848, at *1-2 (Fed. Cir. Feb. 18, 2022).

Zaxcom is estopped from disputing (1) the presence in the cited references of any of the above-listed limitations—or any materially identical limitations, or (2) the obviousness of combining Strub, Woo, Nagai, and Gleissner, because: the issues are identical to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the

Lectrosonics IPRs; and Zaxcom had a full and fair opportunity to litigate the issue in the Lectrosonics IPRs. *See Google v. Hammond*, 54 F.4th at 1381.

2. **Collateral Estoppel Based on PTAB’s Findings Regarding Zaxcom’s Purported Objective Indicia of Nonobviousness**

In the Lectrosonics IPRs, Zaxcom propounded evidence purporting to show objective indicia of nonobviousness, including: testimony alleging a long-felt need for repairing dropouts; testimony alleging failure of others to implement dropout repair; alleged industry praise in the form of witness testimony, an Emmy award, and a Technical Achievement Award from the Academy of Motion Picture Arts and Sciences; and expert testimony attempting to connect the objective-indicia evidence to the challenged claims. *See* Ex. 1019 at 52-59; Ex. 1020 at 54-66; 1021 at 34-59. But the PTAB found that all of Zaxcom’s purported objective indicia related to replacing remotely recorded audio data with local audio data—a/k/a “dropout repair”—and had no nexus with claims lacking that feature. *See* Ex. 1014 at 23-25; Ex. 1017 at 31-35; Ex. 1018 at 28-31. Here, none of the Challenged Claims include dropout repair or replacing remotely recorded audio data with local audio data. Thus, they also have no nexus with Zaxcom’s purported objective indicia of nonobviousness.

Zaxcom is estopped from relying on the same or substantially similar objective indicia of obviousness in the present case, because: the issues are identical

to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the Lectrosonics IPRs; and Zaxcom had a full and fair opportunity to litigate the issue in the Lectrosonics IPRs. *See Google v. Hammond*, 54 F.4th at 1381.

VII. CLAIM CONSTRUCTION

Petitioner does not currently seek construction of any terms.

VIII. OVERVIEW OF THE PRIOR ART

Petitioner asserts three grounds for invalidity based on the following five prior art references:

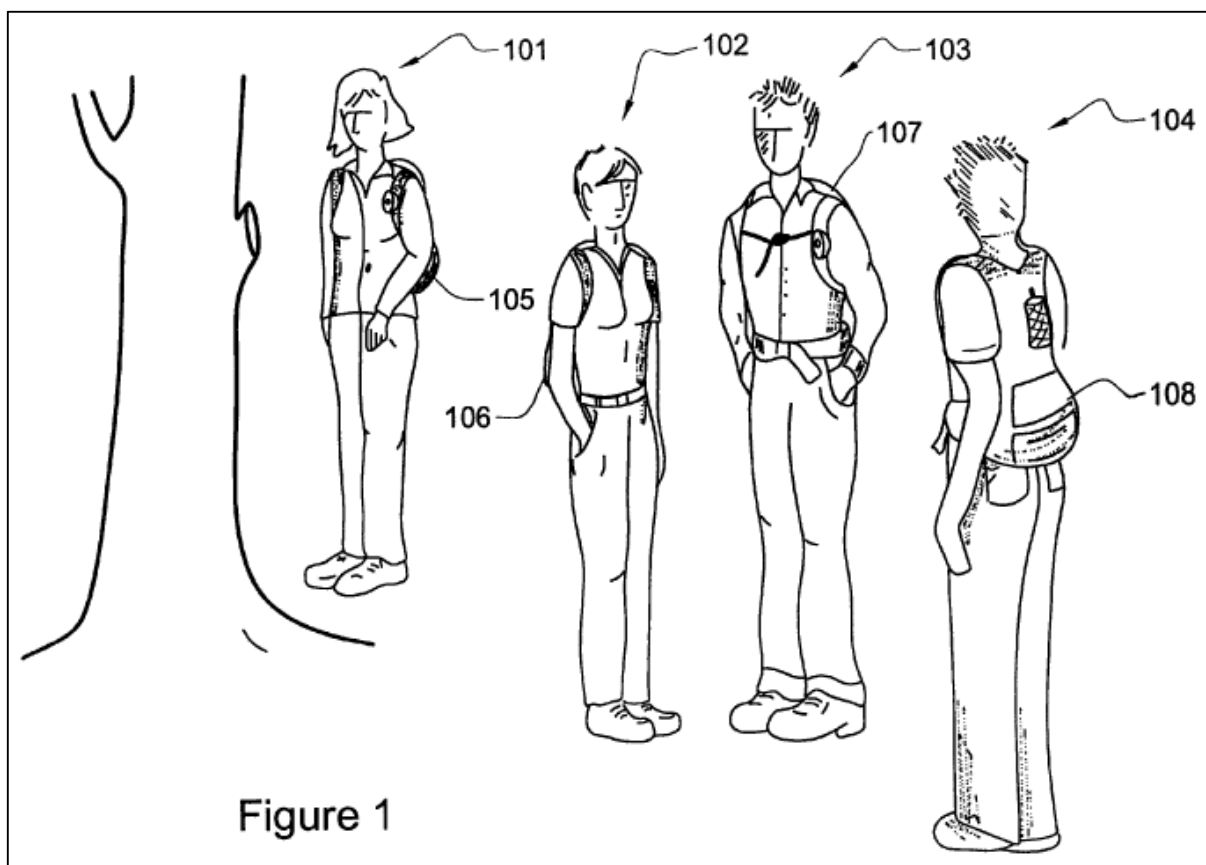
A. Strub

Strub is prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (e). It discloses a system comprising a plurality of wearable, audio/video recording units, each storing locally generated audio and video and wirelessly transmitting that same audio and video to one or more of the other wearable devices. *See, e.g.*, Ex. 1003, 4:28-30 (“a small, lightweight, wearable recording unit”), 8:7-19, 8:50-53, 12:13–21, 12:31–39 (“transmitter 309 transmits signals (‘recording data signals’) representing recording data acquired by the recording unit 300, so that such recording data can be used by other recording units...”), 14:59-15:11 (wearable), 21:65-22:7, 35:54–65, 37:11–40, Figs. 1, 4, 6, 8A-9B. Further, “each recording unit stores data representing the recording(s) obtained by another recording unit[.]....”).

Id. 37:11–40. Thus, from the perspective of a person wearing one of Strub’s recording units, that unit is a local audio device and the recording units worn by other people are remote devices which receive audio data from the local device and create their own recordings of that audio data.

Examples of Strub’s audio/video recording units 105-108 are depicted in Fig.

1:



See also *id.* 8:7-14, 67:30-53, Figs. 4, 6, 8A-9B.

Each of Strub’s audio/video recording units includes a system controller having an internal clock which generates local timecodes “used to time-stamp the

recording data obtained by the recording unit.” *See, e.g., id.* 13:50-58, 63:50-60, 79:54-80:9; *see also* Ex. 1002, ¶ 78.

Strub was not considered in the prosecution of the ’902 Patent. However, it was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over Strub alone and over the combination of Strub with Woo, Nagai, and/or Gleissner. *Supra* § VI.D.

B. Woo

Woo is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a system in which one or more local audio devices—recorders 14 and 16—record locally generated audio and transmit the same locally generated audio to a remote device—editing station 34—which creates its own recording of the audio. *See* Ex. 1004, 5:3-5 (“A recorder 14 captures the performance from its vantage point while another recorder 16 independently captures the same performance from its own vantage point.”), 5:37-49 (“[C]onnections 30 and 32 represent the communication of the respective recordings by wire, radio link and/or tape or film delivery to the editing station 34.”), 8:32-44, 9:40-43, 9:56-62, Figs. 1, 4. Fig. 1 depicts Woo’s system in block-diagram form, including recorders 14 and 16 and editing station 34:

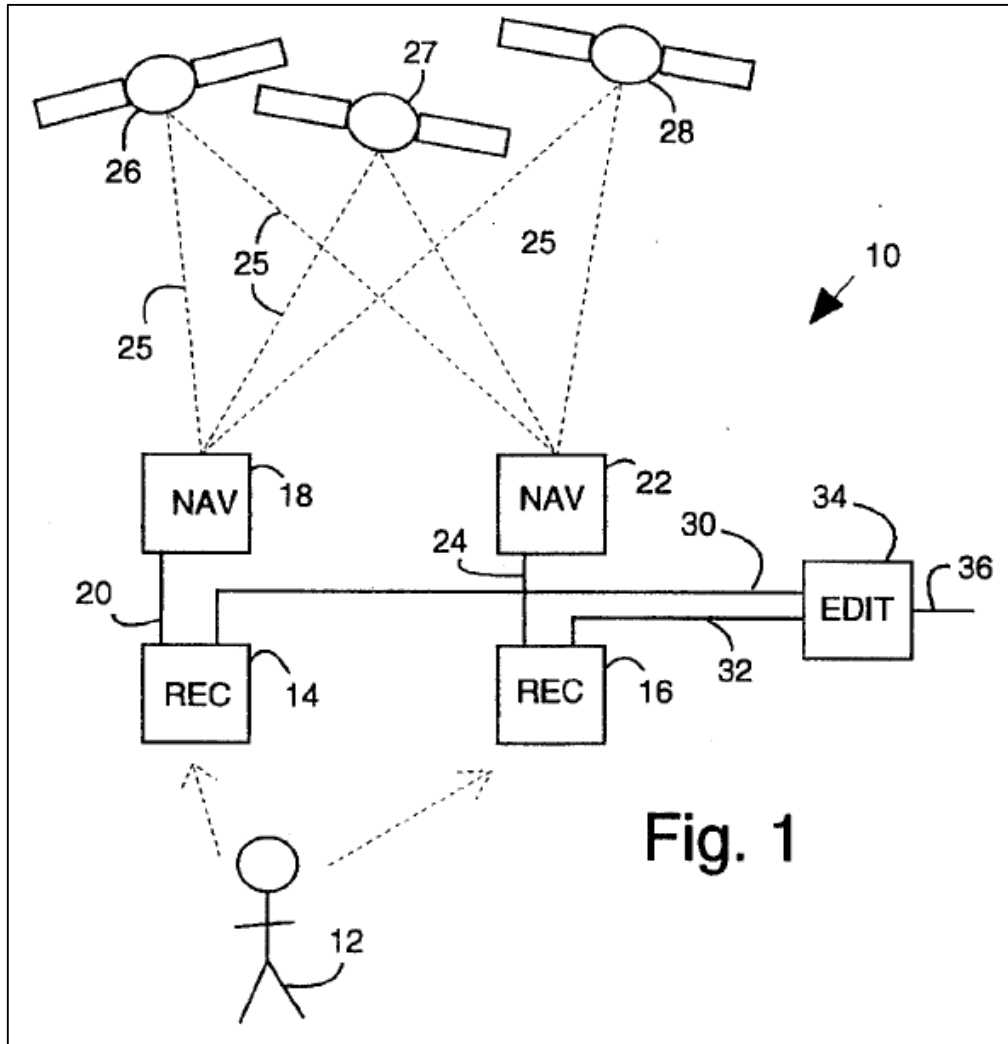


Fig. 1

Each of Woo's local audio devices includes a local timecode generator which is jam-synchronized to a master timecode generator using GPS-based master timecodes. *Id.* Abstract, 3:37-67, 7:26-50, (GPS-based time code generator as a master clock), 8:60-9:4, Figs. 1, 3, 5, 6.

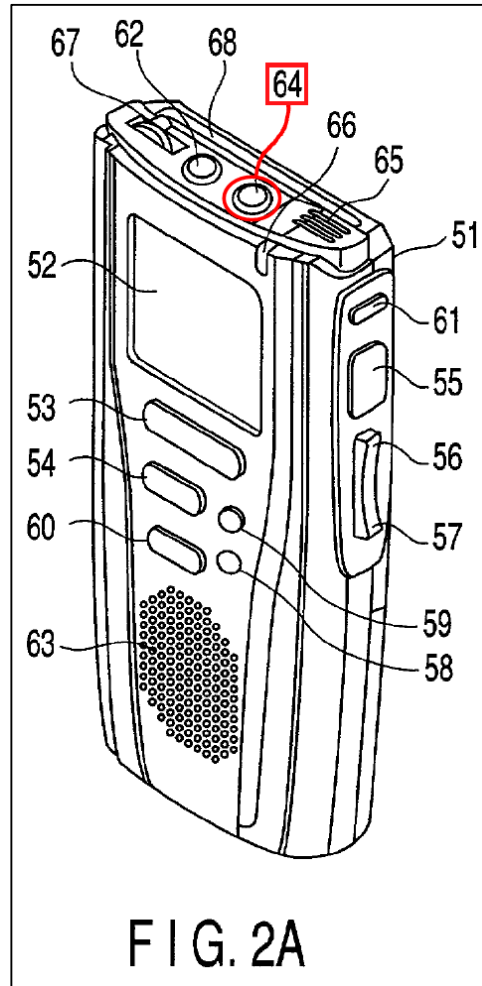
The local timecode generator generates SMPTE timecodes which are used to time-stamp—*e.g.*, date and time tag—the local audio data. *Id.* Abstract (“[SMPTE-formatted] time code information is input to...recorders...to create tracks on each

recording for re-synchronizing the pictures and sounds in post-performance editing”), 1:60-2:9, 2:39-48, 3:3-24, 4:3-32 (“generating coordinated time codes”), 4:62-64 (describing “a time-keeping system for synchronizing sound and picture recordings from a plurality of independent recording devices”), 5:37-45 (recorders “each transmit their respective recordings...to an editing station 34,” each recording “has been date and time tagged.”); *see also* Ex. 1002, ¶ 84.

Woo was not considered in the prosecution of the ’902 Patent. However, it was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over the combination of Strub, Woo, Nagai, and/or Gleissner. *Supra* § VI.D.

C. Nagai

Nagai is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It describes a voice recording and reproducing apparatus with a memory card 117 for storing voice data. Ex. 1005, Abstract, [0105]-[0106], [0115], Figs. 1, 4. Nagai’s voice recorder has an audio input port—mike jack 2 or 64—configured to couple to an audio input device—*e.g.*, external microphone—to receive locally generated voice signals. *Id.*, [0100], [0109]-[0110], [0139], Fig. 1, 2A. An example of Nagai’s audio input port—“mike [sic] jack” 64—is illustrated in Fig. 2A (annotated below):

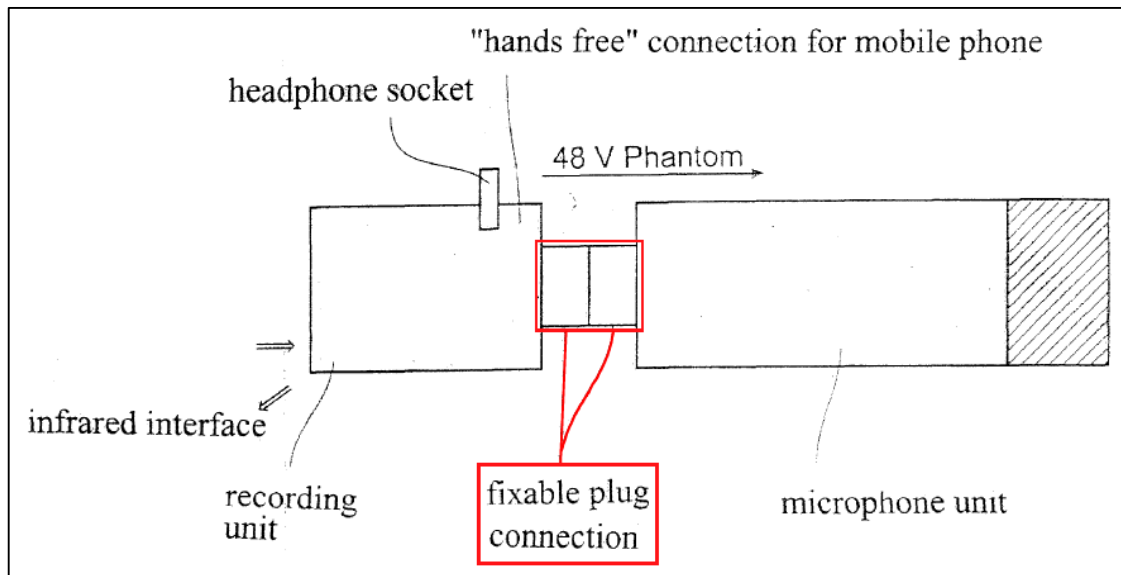


Nagai was not considered in the prosecution of the '902 Patent. However, it was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over the combination of Strub with Nagai or Gleissner and over the combination of Strub with Woo and Nagai or Gleissner. *Supra* § VI.D.

D. Gleissner

Gleissner is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a portable audio data recorder which stores locally generated audio in a

data memory. Ex. 1006, Abstract, [0025], [0031]. Gleissner's audio data recorder has an audio input port—an XLR plug connector—configured to couple to an audio input device—a microphone—to receive locally generated audio. *Id.* [0013], [0024], [0032]. Gleissner's XLR audio input port is depicted in Fig. 1:



Id. Fig. 1 (annotated); see also Ex. 1002, ¶ 92.

Gleissner was not considered in the prosecution of the '902 Patent. However, it was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over the combination of Strub with Nagai or Gleissner and over the combination of Strub with Woo and Nagai or Gleissner. *Supra* § VI.D.

E. Jones

Jones is prior art under at least pre-AIA 35 U.S.C. §§ 102(e). It teaches multiple examples of a multi-memory unit—*e.g.*, flash reader 42, flash reader within

computer 20, and “FlashToaster” 80—each including at least one memory unit interface—*e.g.*, connectors 62, 64, 66, 68—for connection to at least a portion of a memory—*e.g.*, memory cards 16, 18, 24, and 28. Ex. 1010 9:56-10:3 (describing “multi-slot embodiment of the flash-card reader”), 10:4-29 (“separate connectors 62, 64, 66, 68 with separate slots in flash reader 42 allows for card-to-card transfers.”), 10:30-12:25 (describing Figs 6B-9), Figs. 6A-9; *see also* Ex. 1002, ¶ 103.

Jones was not considered in the prosecution of the ’902 Patent or in the Lectrosonics IPRs.

IX. SPECIFIC GROUNDS FOR INVALIDITY

A. Ground 1: Claims 1-3, 6, 13, and 16 are Rendered Obvious Under § 103 By the Combination of Strub, Woo, Nagai, and Gleissner

1. A POSA Would have Been Motivated to Combine Strub, Woo, Nagai, and Gleissner

In the Lectrosonics IPRs, the PTAB found that a POSA would have motivated to combine Strub, Woo, Nagai, and Gleissner, and that the combination(s) would have been obvious. *See supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

Moreover, the teachings of Strub, Woo, Nagai, and Gleissner provide substantial motivation to combine them. For example, the systems described in Strub and Woo are the same type of apparatus used for the same purpose. Each discloses a system for receiving and recording local audio in a local device,

wirelessly transmitting the same audio to a remote device, and recording the audio in the remote device. *See, e.g.*, Ex. 1003, 8:50-53, 12:13-21, 12:31-39, 21:65-22:7, 35:54-65, 37:11-40, Figs. 1, 4, 6, 8A-9B; Ex. 1004, 5:3-5, 5:37-49, Fig. 1. In addition, each of the local audio devices of Strub and Woo wirelessly receives master timecodes from a master timecode generator and uses the timing information from the master timecodes to stamp the local audio. *See, e.g.*, 1003, 13:50-58, 63:50-60, 79:54-80:9; Ex. 1004, Abstract, 1:60-2:9, 2:39-48, 3:3-24, 3:37-67, 4:3-32, 4:62-64, 5:37-45, 7:26-50, 8:32-44, 8:60-9:4, 9:40-43, 9:56-62, Figs. 3-6.

Indeed, Woo itself provides express motivations to use its synchronization methods in a wireless, multi-recorder system such as Strub's. For example, Woo's master clock (1) provides accurate synchronization across recorders recording a performance, (2) can generate coordinated timecodes at independent sites proximate to recorders, (3) is simple to connect to the recorders, and (4) provides timecode output in a format that is compatible with a standard (SMPTE) used by commercially available equipment. Ex. 1004, 4:3-44; *see also* Ex. 1017 at 29. In addition, modifying Strub's recording unit to include a conventional SMPTE timecode input port for receiving conventional SMPTE-formatted master timecodes from Woo's master clock would involve nothing more than combining familiar elements according to known methods to improve Strub's system and yield predictable results. Ex. 1002, ¶ 107.

Nagai and Gleissner teach audio recording systems, each having an audio input port—a “mike jack” or XLR plug connector—configured to couple to an audio input device for receiving locally generated audio. Ex. 1005, [0100], [0109]-[0110], [0139], Fig. 1, 2A; Ex. 1006, [0013], [0024], [0032], Fig. 1. Audio plugs and jacks such as those referenced in Nagai have existed for more than 130 years and have not changed substantially since the 19th century. *See, e.g.*, Ex 1023; Ex. 1024. XLR connectors such as those referenced in Gleissner were so common as of the priority date of the '207 Patent that they had been standardized. Ex. 1025 at 1 (standard date March 2004), *passim* (copyright year 2004). A POSA would have considered it obvious to use those well-known standard connectors in Strub’s local audio device because of their popularity, especially since Strub teaches the use of specific brands of commercially available microphones configured to be plugged into a standard XLR jack as described in Gleissner. Ex. 1003, 25:35-49; Ex. 1026 at 6, 14 (CSS-5 uses XLR-5 “IN/OUT” connection), *passim* (other XLR-connected microphones); Ex. 1027, at 7 (CSS-5 uses XLR-5 “IN/OUT” connection), *passim* (other XLR-connected microphones); Ex. 1002, ¶ 108.

Moreover, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007). Motivation to combine is particularly strong where “there is a design

need or market pressure to solve a problem and there are a finite number of identified, predictable solutions.” *Id.* 421. This is especially true where the cited references teach (1) “all the limitations of [the challenged] claims,” and (2) the same “known problem” addressed by the challenged patent. *Ball Aerosol and Specialty Container, Inc. v. Ltd. Brands, Inc.*, 555 F.3d 984, 993 (Fed. Cir. 2009).

The ’902 Patent sought to solve the problem of matching the timing between multiple recordings produced by one or more wireless devices. Ex. 1001, 1:26-58. It solved that problem by generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp the locally recorded audio data. *Id.* 3:53-56, 4:14-36, 4:62-5:19, 6:11-15, 10:17-32, 10:56-62, 14:9-17, 14:55-59, 15:65-16:1, 16:30-46, Figs. 3A, 4A, 4B, 5, 6. Strub and Woo recognized and solved that same problem in the same way. See Ex. 1003, 13:50-58 (local audio device includes “clock that is used to time-stamp the recording data obtained by the recording unit.”), 62:26-63:50 (GPS “current time that can be used as a clock to generate time-stamps”), 63:50-60, 75:25-57 (“SMPTE time code input...to enable synchronization with an external device”), 79:54-80:9; Ex. 1004, Abstract (time code information” from “GPS receiver”), 1:60-2:9, 2:39-48, 3:3-24, 3:37-67, 4:13-19 (SMPTE timecodes from “GPS navigation receiver”), 5:5-10, 5:21-29, 5:37-45

(recordings “date and time tagged”), 7:26-50, 8:60-9:4, 9:33-39, 9:45-55, 10:15-11:1, Figs. 1, 3-6; *see also* 1002, ¶ 111.

In addition, “when a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 550 U.S. at 417. Every element of Challenged Claims 1-3 and 6 appears in Strub, Woo, Nagai, and/or Gleissner. *See infra* § IX.A.2. Those elements are standard method steps using well-known, off-the-shelf audio-recording and radio components that would be familiar to any POSA. Ex. 1002, ¶ 112. There is nothing unpredictable about the claimed use of those components in a wireless audio-recording system. *Id.*; *see KSR*, 550 U.S. at 417 (To determine obviousness, “a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.”). Furthermore, the technology and operation of such components was well-understood in the relevant period such that the combination of Strub, Woo, Nagai, and Gleissner would have had a high likelihood of success. Ex. 1002, ¶ 112.

Thus, since Strub and Woo teach the same kind of device used for the same purpose, since Strub and Woo identified the same problem identified in the ’207 Patent and solved it in the same way, since the microphone jacks and plugs of Nagai and Gleissner were old elements performing the same function they had always been

known to perform, since audio input ports in general have been known for over a century, since the combination of elements in the Challenged Claims is nothing more than “the predictable use of prior art elements according to their established functions,” and since the combination of Strub, Woo, Nagai, and Gleissner would have had a high likelihood of success, a POSA would have been motivated to combine Strub, Woo, Nagai, and Gleissner.

2. **The Combination of Strub, Woo, Nagai, and Gleissner Meets All Elements of Challenged Claims 1-3, 6, 13, and 16**

As discussed below, the Preambles and every element of Claims 1-3, 6, 13, and 16 are taught by Strub, Woo, Nagai, and/or Gleissner. To the extent Patent Owner alleges that any of those references fails to teach any claim element, that element is provided by the other references. Further, to the extent the teachings of any of Strub, Woo, Nagai, and/or Gleissner are substantively different for any given claim element, it would have been at least obvious to try the other references’ implementation of that element, given the overall similarity in their purpose, design and operation.

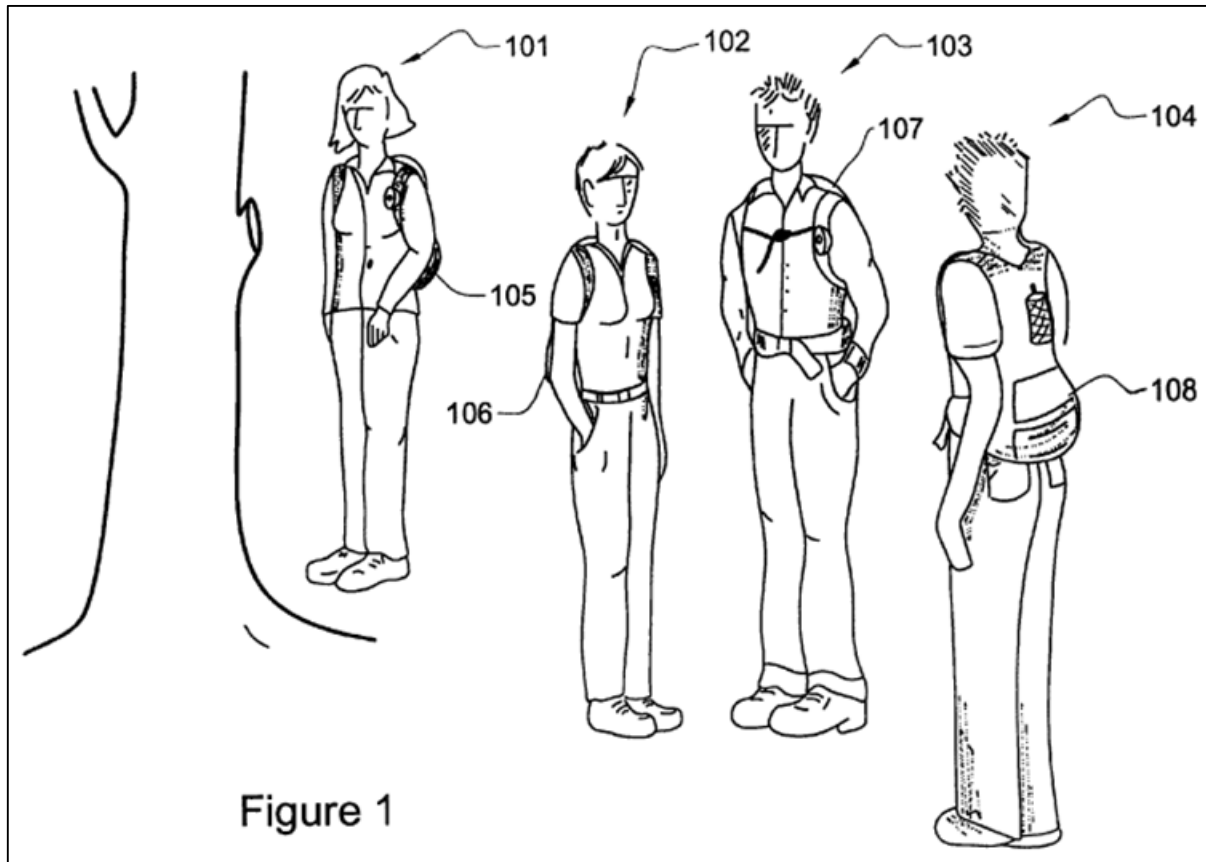
a. **Claim 1.**

(1) **1[Pre]: “A system for recording locally generated audio comprising:”**

Regardless of whether the preamble is limiting, it is taught by Strub. In the Lectrosonics IPRs, the Board found that Strub teaches “a local audio device that

records local audio.” *See supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

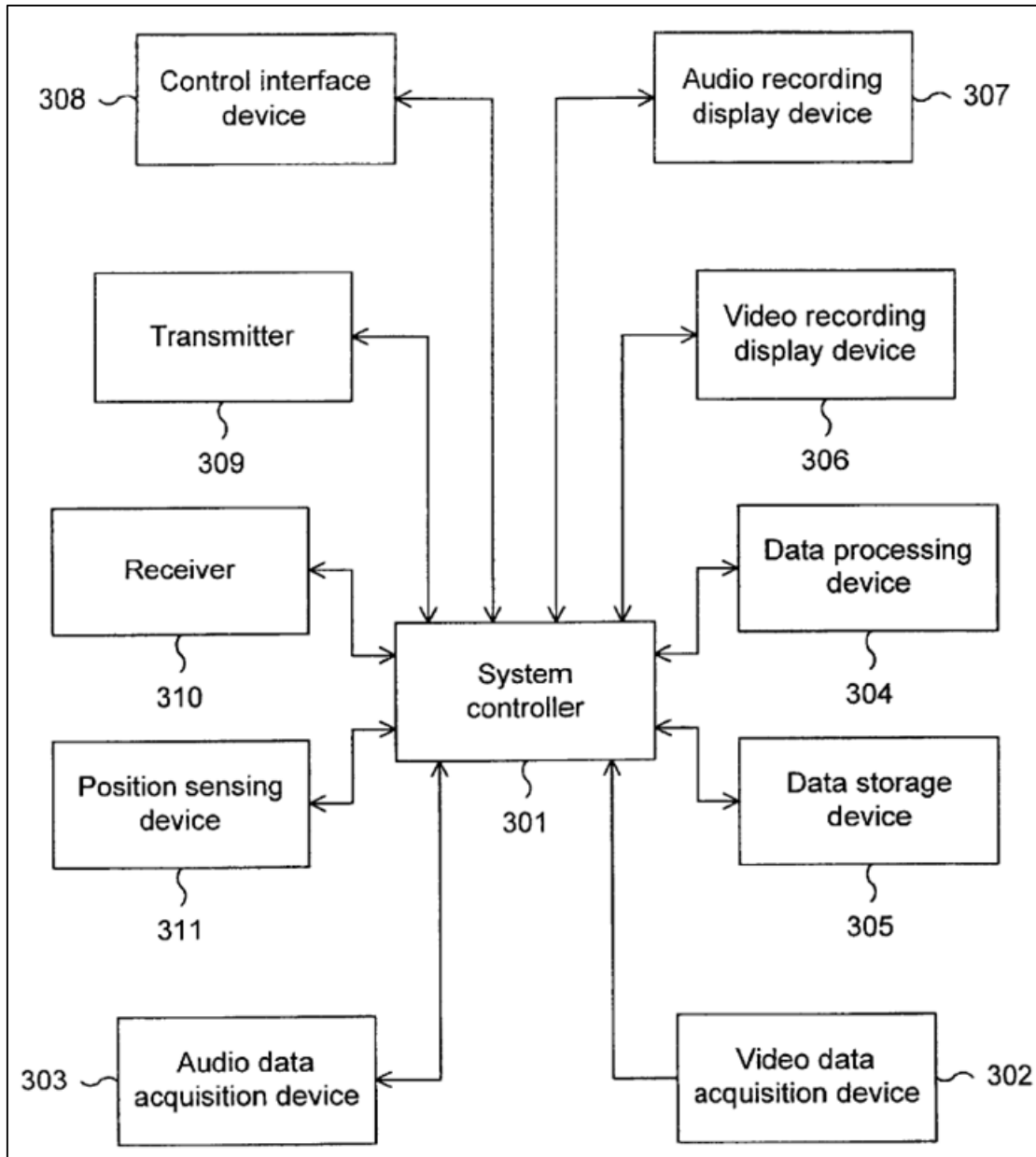
Strub discloses at least one audio device—*e.g.*, recording units 105-108, 200, and 300 worn by a plurality of users as depicted in Ex. 1003, Fig. 1:



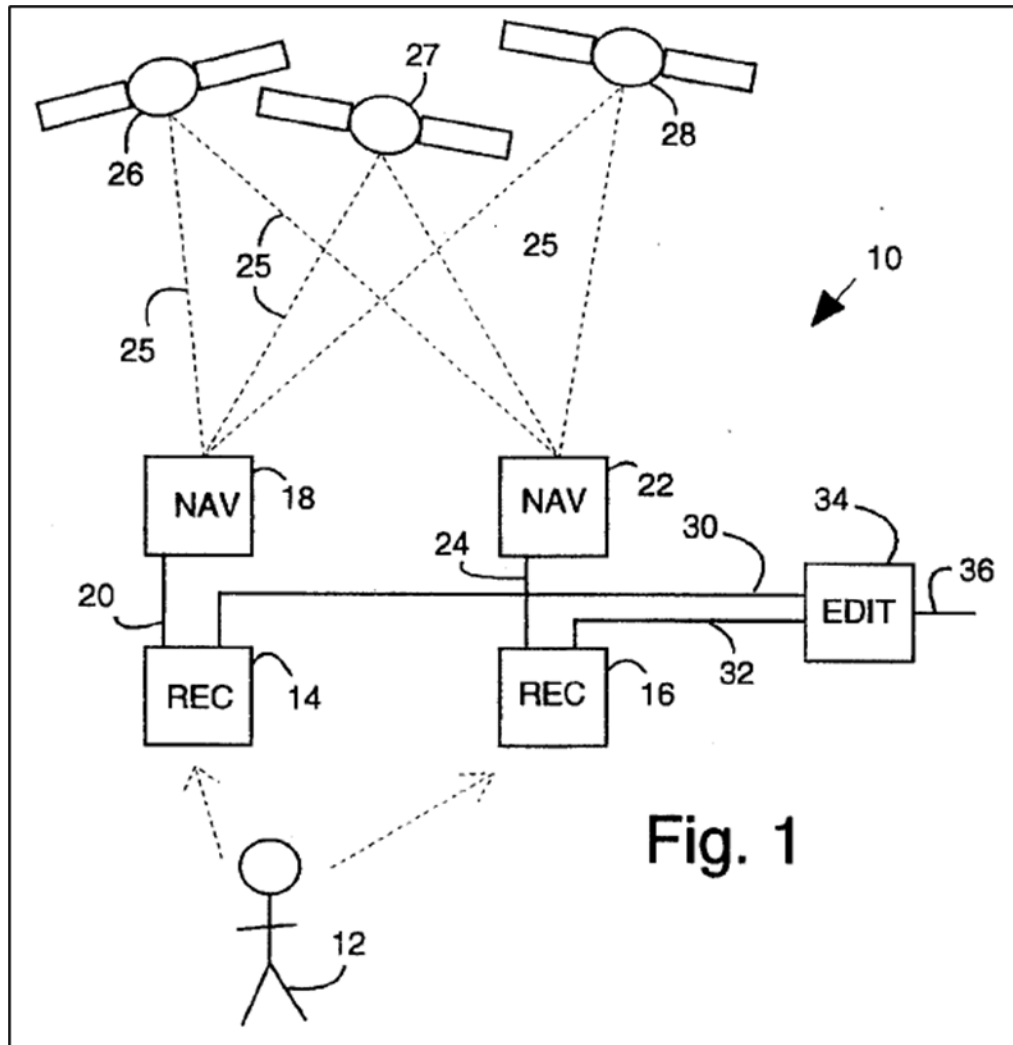
Each of Strub’s recording units is wearable by a user and is for storing, *e.g.*, recording, locally generated audio and transmitting the locally generated audio to a remote device—*e.g.*, a different one of the recording units. *See* Ex. 1003, 8:10-29, 8:50-53, 11:32-50, 12:13-21, 12:31-39, 25:35-49, 35:54-65, 37:18-40, 38:1-4,

Figs. 1 (recording units 105-108), 2 (recording unit 200), 3 (recording unit 300); see *generally id.* 35:53-38:39.

The internal components of an exemplary local audio device are depicted in Fig. 3 of Strub:



The preamble is also taught by Woo. Woo's system includes at least one local audio device—*e.g.*, an arrangement comprising recorder 14/16, GPS receiver 18/22, and time code generator 43—which stores locally generated audio and it to a remote receiver and recorder—editing station 34, as depicted in Figs. 1 and 3:



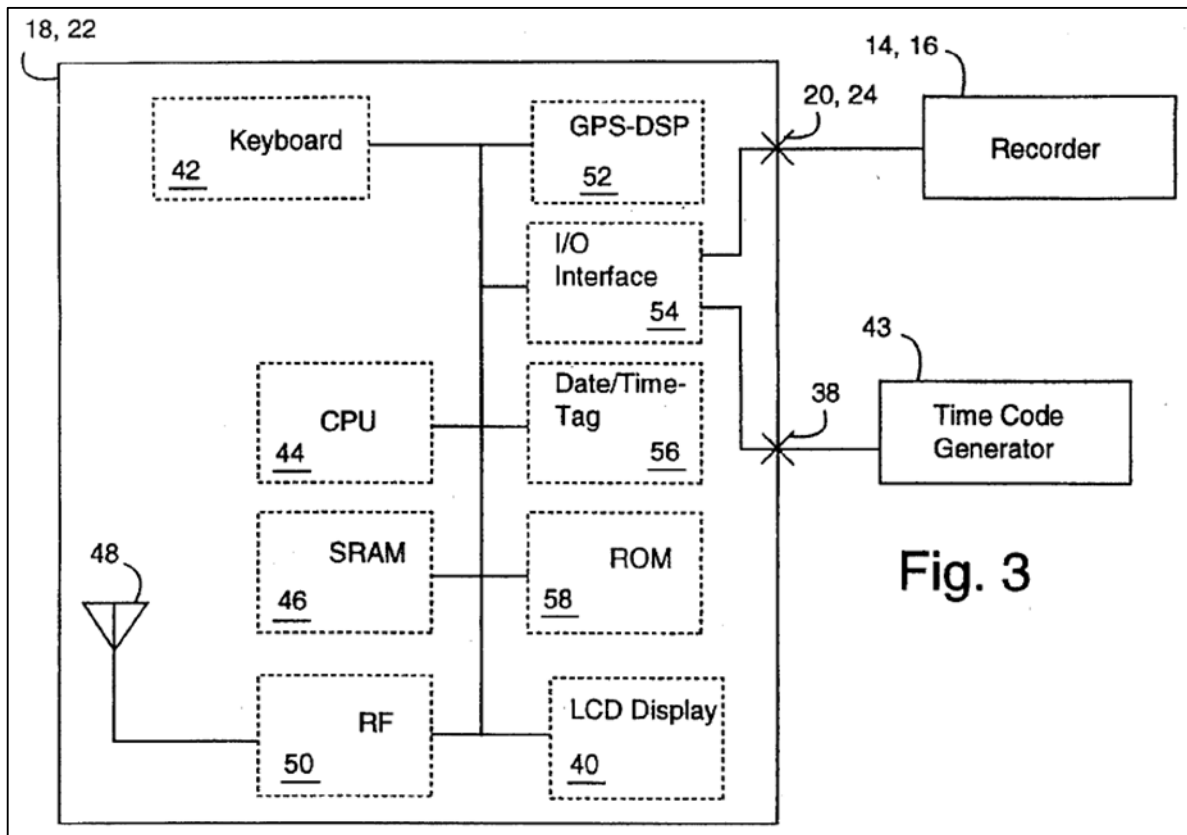


Fig. 3

See also Ex. 1004, 5:3-5 (multiple recorders), 5:37-49 (“[C]onnections 30 and 32 represent the communication of the respective recordings...to the editing station 34.”), 8:32-44, 9:40-43, 9:56-62, Figs. 1, 3, 4.

A POSA would have understood that, in addition to comprising a recorder, editing station 34 necessarily would comprise a receiver in order to receive the audio signals from the local audio devices. Ex. 1002, ¶ 123. Communication between the local audio devices and the remote receiver/recorder 34 are illustrated in Fig. 1. *Id.*

(2) **1[A]: “at least one master timecode generator for generating a plurality of master timecodes; and”**

In the Lectrosonics IPRs, the Board found that Strub teaches receiving master time data, that Woo discloses a “master timecode generator for generating a plurality of master timecodes,” “just as disclosed by the [related ’902] patent,” and that a POSA would have been motivated to use Woo’s synchronization techniques in Strub’s system—findings that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

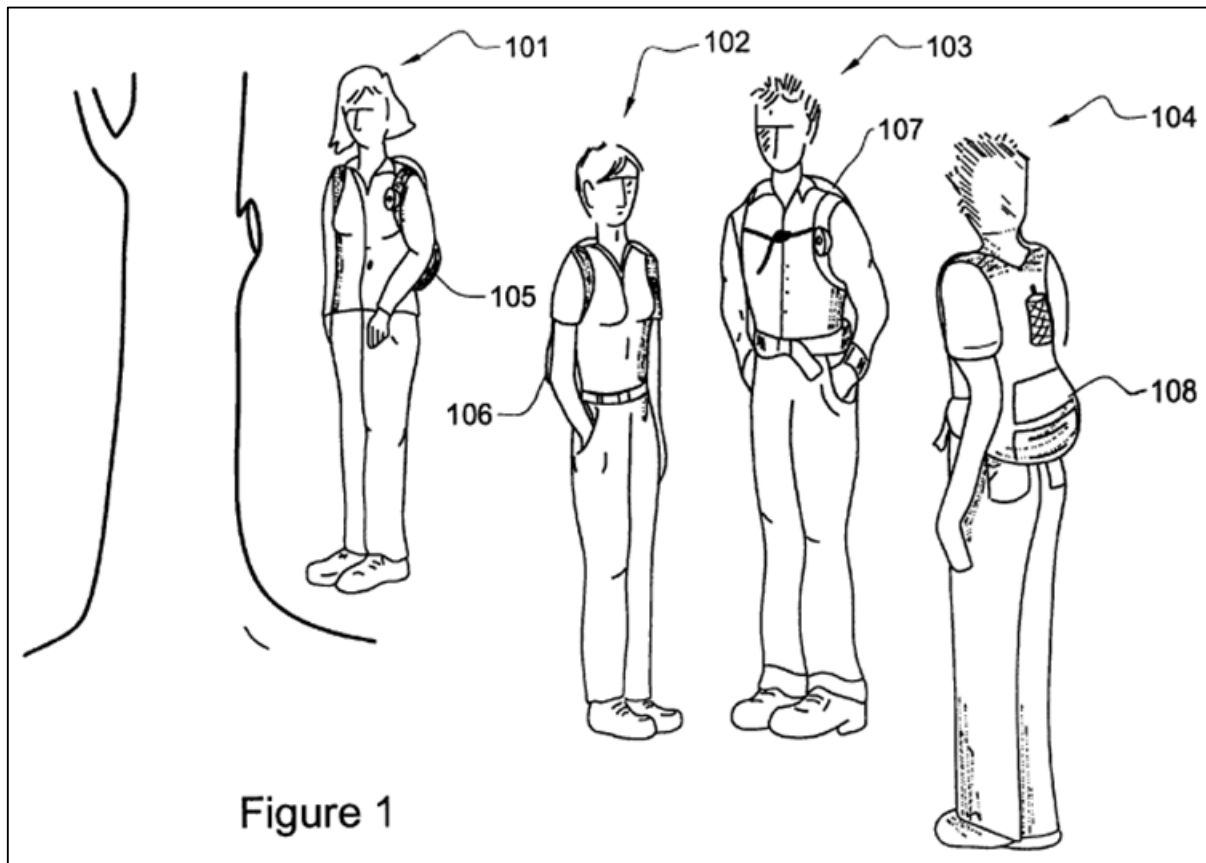
For example, Strub discloses receiving a master timecode—*e.g.*, GPS time information—from a master timecode generator—*e.g.*, GPS satellite or SMPTE timecode source. Ex. 1003, 62:53-54, 63:50-60; 79:63-80:7, 75:25-57 (“SMPTE time code input”), 63:50-60. Strub also discloses synchronizing an internal clock with GPS or SMPTE timecodes (“master timecodes”).

To the extent Zaxcom contends Strub does not disclose Element 1[A], it is taught by Woo. Specifically, Woo also discloses receiving a master SMPTE timecode from a master timecode generator—*e.g.*, GPS satellites 26-28. Ex. 1004, 4:13-19, 4:45-48, 5:5-10, 5:21-29, 5:54-67, 7:18-47, 7:48-9:19, 9:33-39, 9:45-55, 10:15-64, Figs. 2-4; Ex. 1002, ¶ 153.

(3) **1[B]: “at least one local audio device wearable by a creator of said locally generated audio including:”**

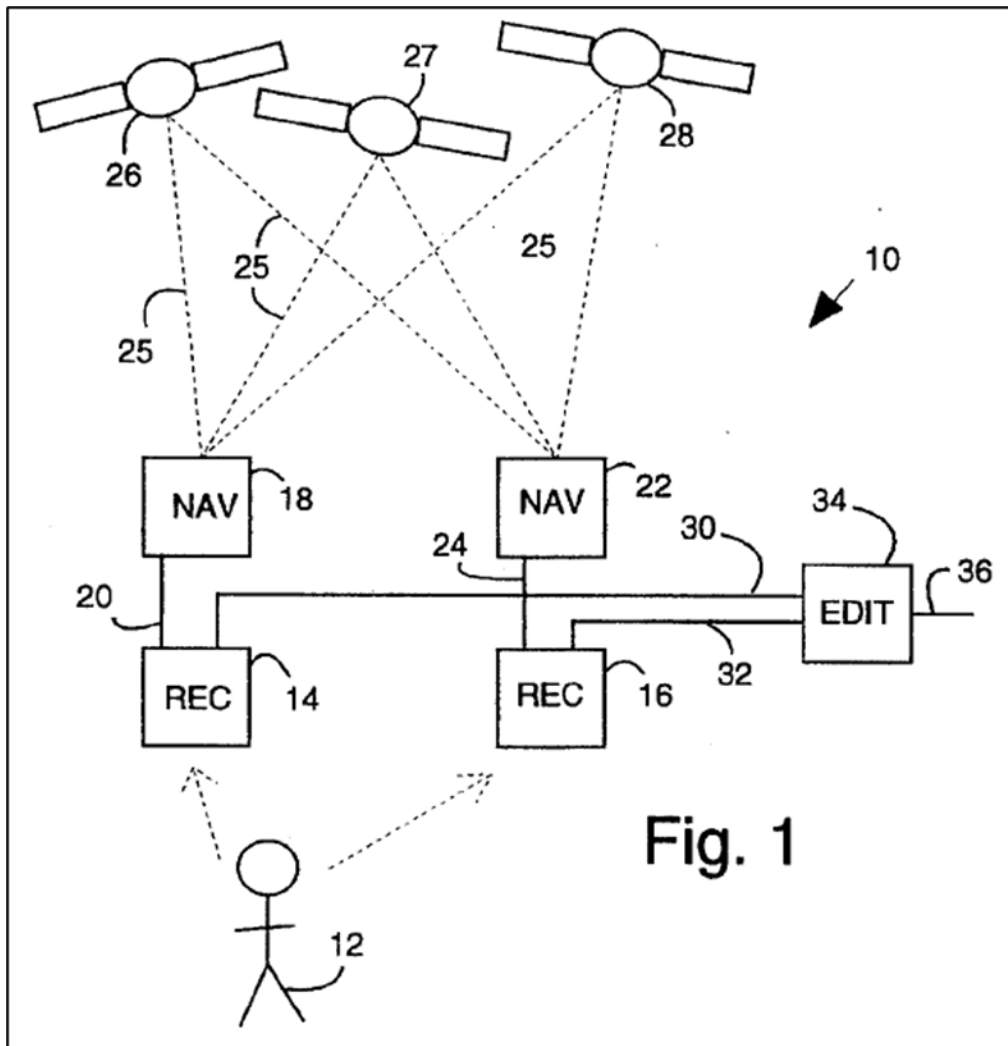
In the Lectrosonics IPRs, the Board found that Strub teaches a “wearable local audio device.” *See supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

Specifically, Strub discloses at least one audio device—*e.g.*, one of recording units 105-108, 200, and 300—which are worn by a plurality of users as depicted in Ex. 1003, Fig. 1:



See also, id. 4:21-31 (“a small, lightweight, wearable recording unit”), 14:59-15:11, 16:66-17:24, 38:65-39:11, 66:33-51, 67:54-68:10, 72:9-19.

Woo's system includes at least one local audio device which stores locally generated audio and transmits it to a remote recorder—editing station 34, as depicted in Figs. 1 and 3:



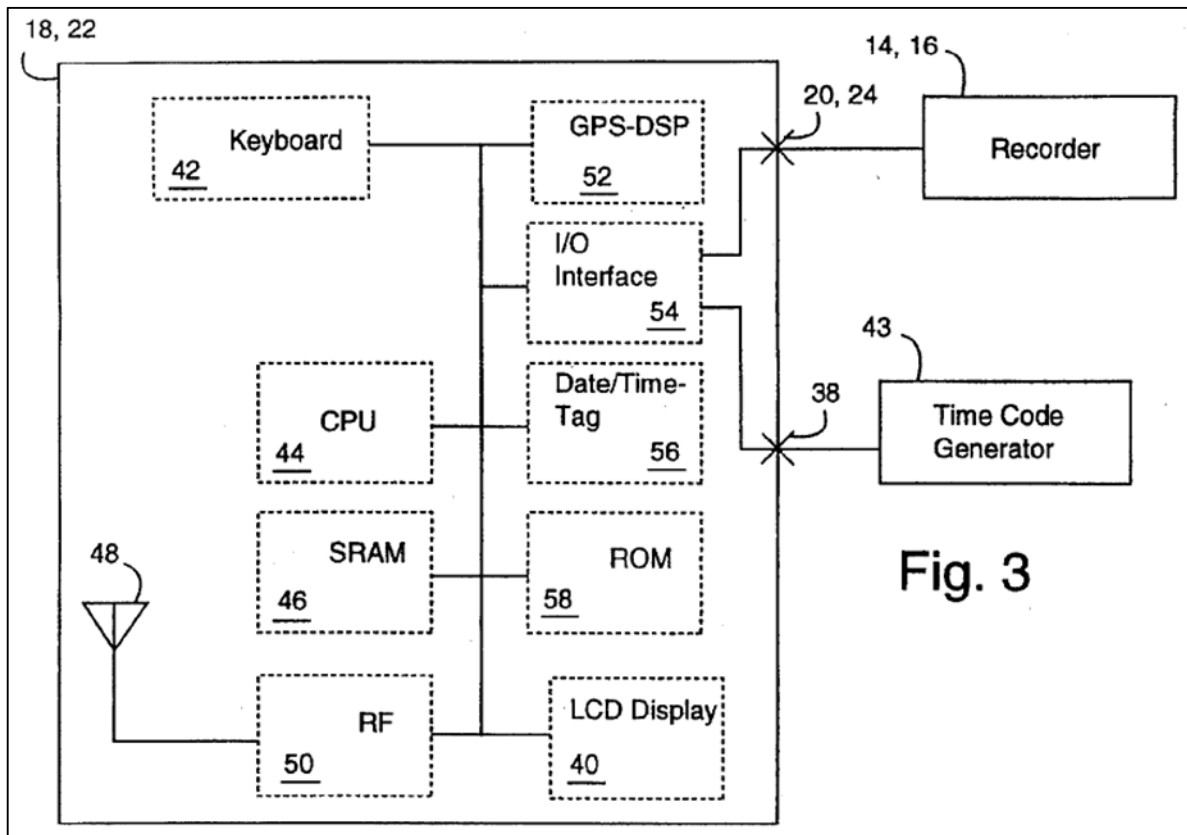


Fig. 3

See also Ex. 1002, ¶ 123.

(4) **1[C]: “at least one local audio device receiver for receiving at least one of the group consisting of digital commands, said master timecodes, and non-local audio data;”**

In the Lectrosonics IPRs, the Board found that Strub discloses “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory.” Ex. 1017 at 25-31; Ex. 1018 at 22-28. *Supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

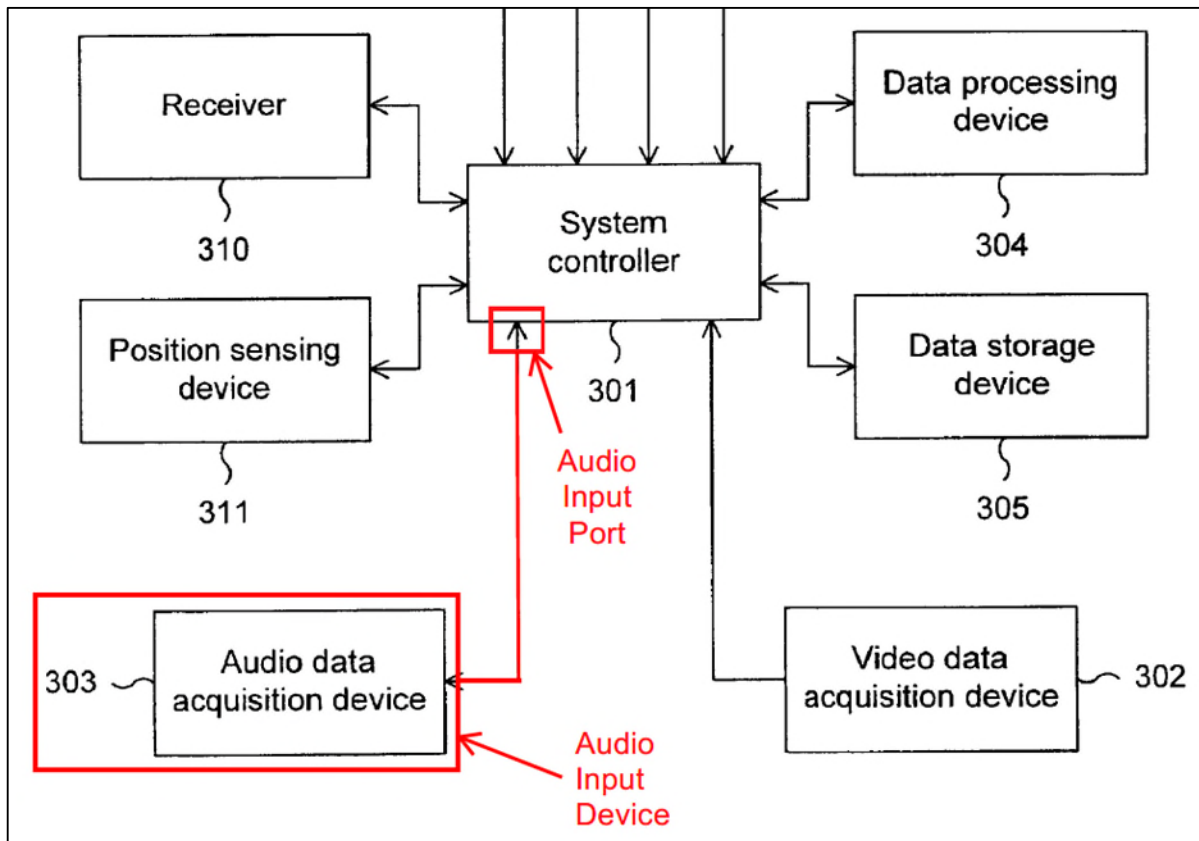
Strub teaches that each local audio device comprises a “recording unit.” Ex. 1003, Fig. 1, 8:6-20. Each recording unit includes a “receiver” 310. *Id.*, Fig. 3, 12:31-46. This receiver receives non-local audio data. *Id.* 12:31-46 (“receives recording data signals representing recording data acquired by one or more other recording units.”) (emphasis added), 35:51-65. Additionally, Strub discloses that the recording unit also contains a “GPS receiver” that receives master time codes, *e.g.*, GPS time, from a master time code generator, *i.e.*, a GPS satellite or SMPTE timecode source. *Id.*, 5:32-66 (“GPS receiver” as part of auxiliary device of recording unit), 63:41-60 (recording unit includes “GPS receiver” to receive GPS signals to use as “a clock to generate time-stamps”), 75:25-57 (receiver port for “SMPTE time code input,” for master timecodes to sync devices). The internal components of an exemplary local audio device (*e.g.*, recording unit) are depicted in FIG. 3 of Strub. *See also id.* 62:26-55 (recording unit includes position sensing device 311 comprising a GPS receiver).

Woo discloses local audio devices (recorders 14 and 16). Ex. 1004, Fig. 1, 5:1-5. These recorders include “satellite receiver(s)” 18 and 22 for receiving GPS signals. *Id.* 5:5-16, 5:54-58. Satellite receivers 18 and 22 include time code generators 43, for generating “master” time codes (including SMPTE time codes) for the recorders. *Id.* Figs. 1 and 3, 4:3-37, 7:27-38, 7:49-53, 8:19-36.

(5) **1[D]: “at least one audio input port for receiving locally generated audio from an audio input device;”**

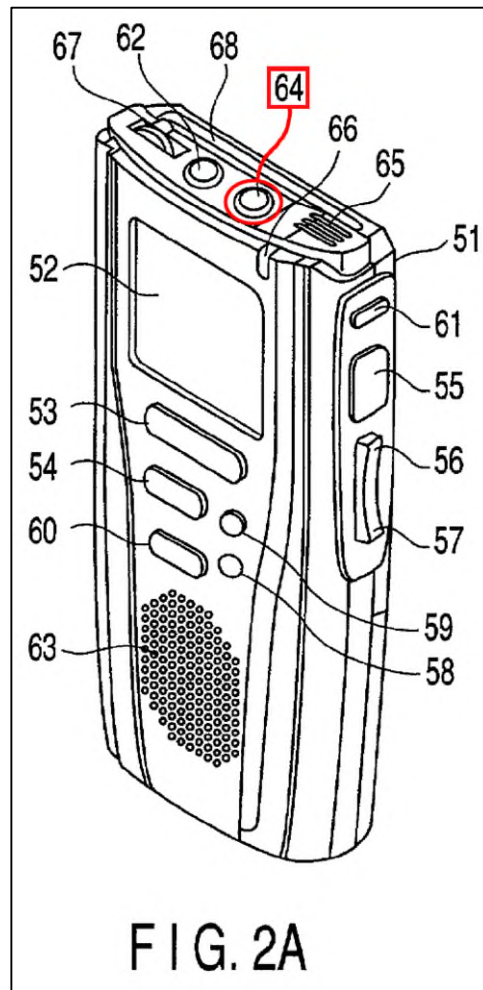
In the Lectrosonics IPRs, the Board found that each of Strub, Nagai, and/or Gleissner teaches an “audio input port for receiving said locally generated audio from an audio input device,” and that it would have been obvious to combine Strub with Nagai or Gleissner. *Supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

For example, Strub’s audio data acquisition device 303 is an audio input device, specifically a microphone. Ex. 1003, 21:65-22:2; 22:64-23:31, 25:25-49, 60:3-5. The system controller 301 in Strub’s local audio recording unit 300 has a local audio input port—the controller’s connection to audio input device 303 (*e.g.*, a microphone)—for receiving locally generated audio from the audio input device 303:



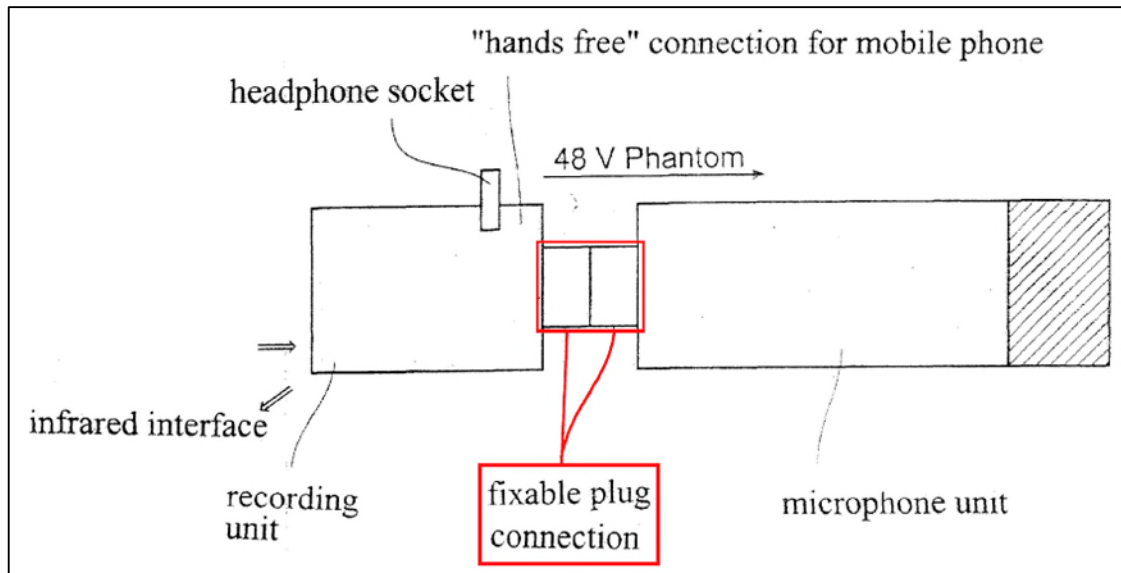
Ex. 1003, Fig. 3 (excerpted, annotated); *id.* 21:65-25:49, 68:63-69:67 (receiving audio from a microphone), 64:50-65:3 (describing wired or wireless connections between components using techniques known in the art, including a standard microphone jack). Furthermore, Strub states: “It can be advantageous to mount the audio...data acquisition device[s] so that the audio...acquisition device[s] [is] detachably attached.” *Id.* 69:23-26. A POSA would interpret Strub’s statement about detachability as meaning that the microphone is not soldered or hard-wired, but it connected to the local audio device through an audio input port such as a microphone jack and/or plug.

To the extent Zaxcom contends that Strub does not disclose Element 1[D], this element is taught by each of Nagai and Gleissner. For example, Nagai's audio recorder has an audio input port—"mike jack" 2 or 64—for coupling to an audio input device—specifically, an external microphone, or "mike [sic]"—to receive the locally generated audio:



Ex. 1005, Fig. 2A (annotated); *id.* [0100], [0109], and [0139], Fig. 1.

Gleisser's audio recorder has a conventional audio input port—an XLR plug connector—to couple to an audio input device—a microphone—to receive the locally generated audio:



Ex. 1006, Fig. 1 (annotated); *id.* [0013] (“XLR connector” for microphone), [0024], [0032]. Gleissner provides explicit motivation for using a standard microphone connector: “This has the advantage that the recording unit can be coupled together with practically any desired microphones, because an XLR connector is generally formed as the preferred embodiment in the case of microphones.” *Id.* [0013].

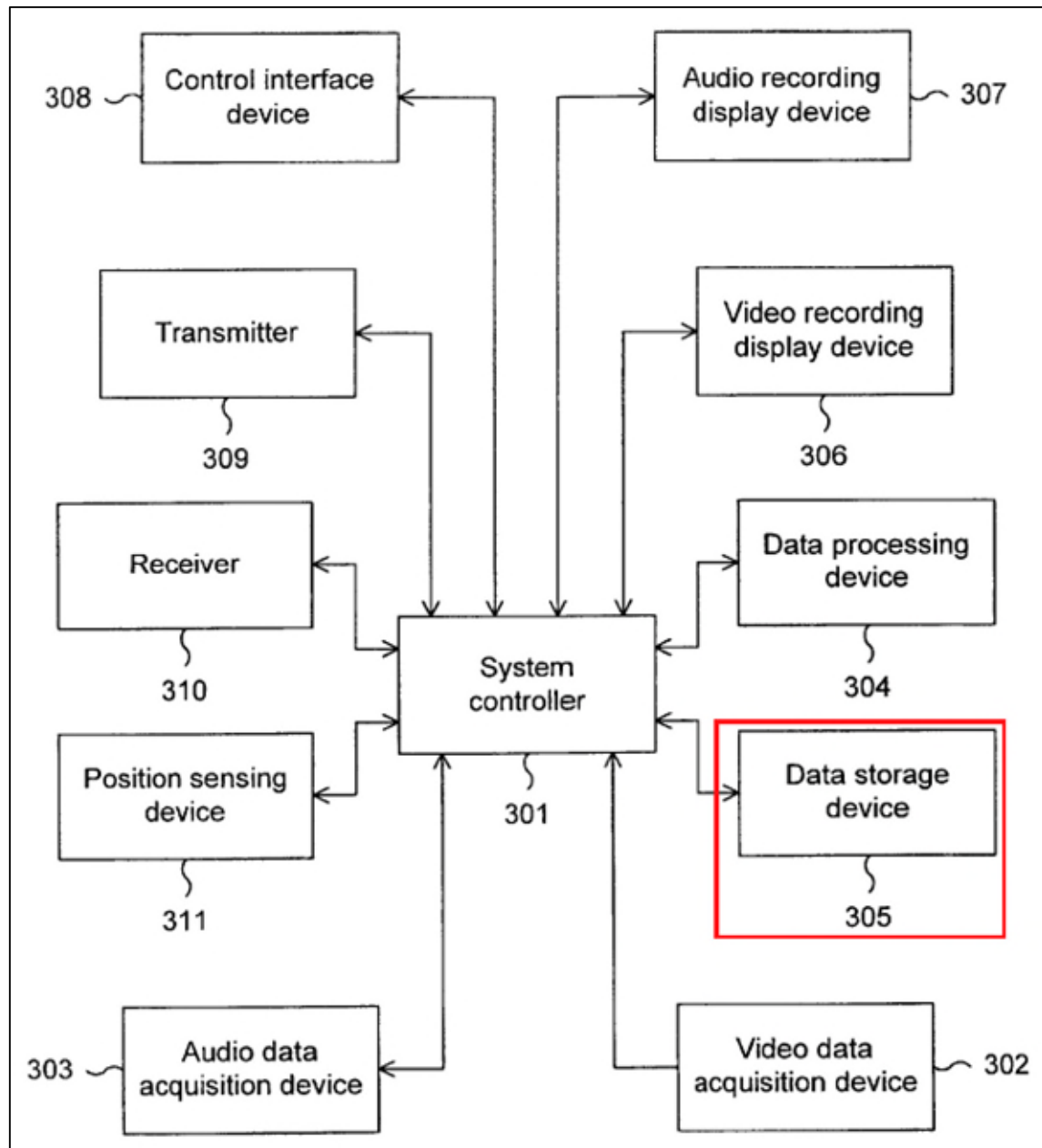
Woo refers to using a recorder 14 to “record the live performance of a performer 12.” Ex. 1004, 5:1-5. A POSA would have understood that recorder 14 necessarily would have had an audio input port to couple to a microphone to receive the sound from the performer. *See* Ex. 1002, ¶ 133.

Furthermore, a POSA would have been motivated to include Nagai's microphone jack or Gleissner's microphone plug connection in Strub's and/or Woo's local audio device because there were many different types and brands of microphones that were commercially available at or before the priority date of the '902 Patent. Ex. 1003, 21:65-22:2, 22:65-23:31, 24:61-64, 25:35-49, 29:35-37, 31:37-45, 32:17-26, 68:63-69:18, 84:52-62; Ex. 1002, ¶ 134. A POSA would have understood the advantages of using Nagai's or Gleissner's standard microphone jacks and plugs to allow different kinds of microphones to be easily swapped in and out of Strub's and Woo's audio recording systems to match the systems to the particular application and environment, and thus would have considered the combination obvious. Ex. 1002, ¶ 134.

(6) **1[E]: “at least one memory; and”**

In the Lectrosonics IPRs, the Board found that Strub teaches that the local audio device has a memory, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Specifically, Strub's local audio device has at least one memory—*e.g.*, data storage device 305:



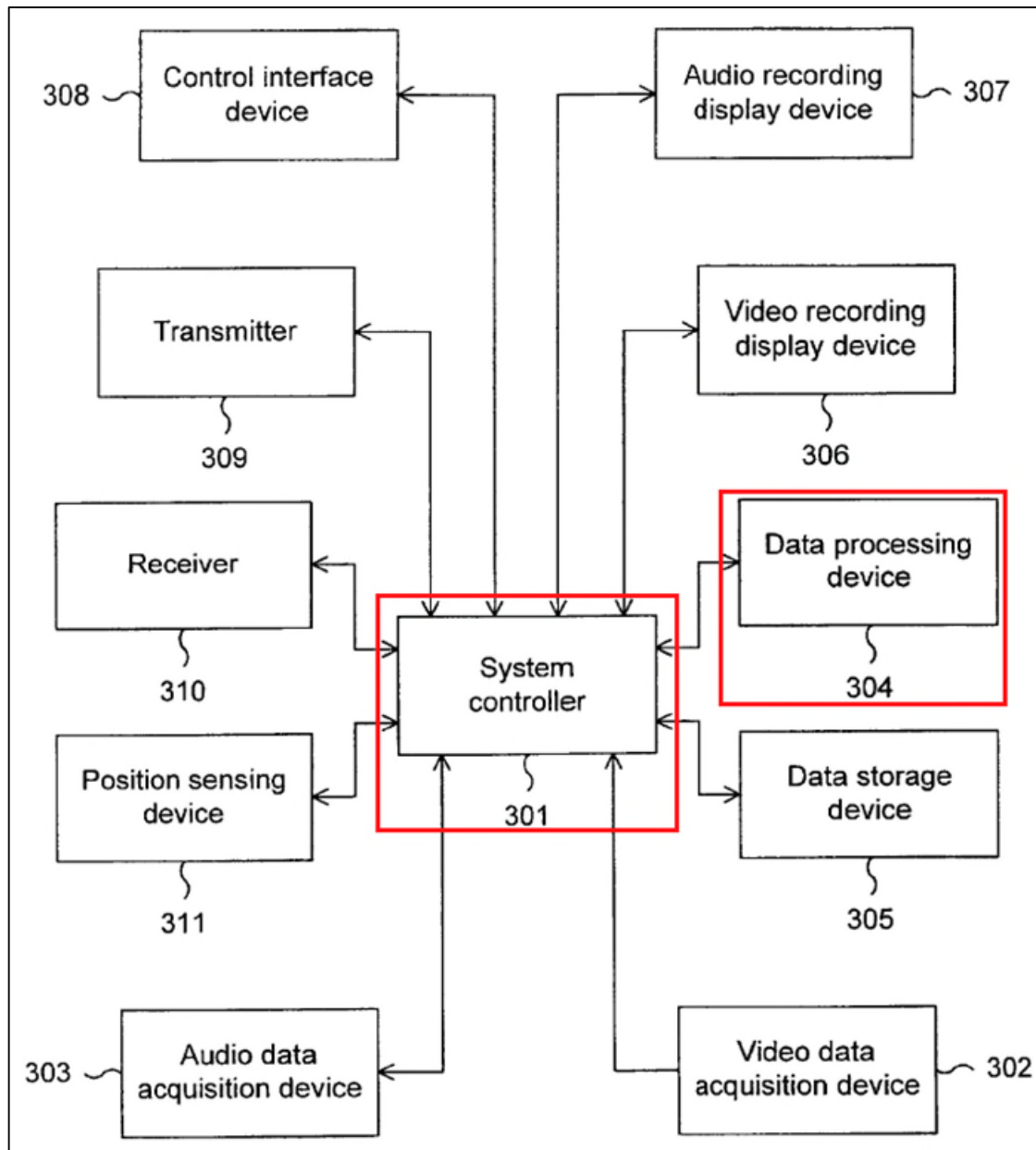
Ex. 1003, Fig. 3 (annotated).

Memory 305 may include a hard disk, a removable data storage medium such as a recordable-once DVD disk or a recordable/writable DVD disk, or a non-volatile data storage device, such as solid state or flash memory. *Id.*, 27:36-51, 33:20-35:50, 76:6-34, 94:15-20, Fig. 3; Ex. 1002, ¶ 137.

(7) **1[F]: “at least one control unit electrically coupled to said local audio device receiver, said audio input device, and said memory for creating local audio data from said locally generated audio and storing said local audio data in said memory;”**

In the Lectrosonics IPRs, the Board found that Strub teaches “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator,” a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Strub’s local audio device includes a control unit—*e.g.*, system controller 301 and/or data processing device 304—which is coupled to the receiver 310, the audio input port (the connection to audio data acquisition device 303), and the memory (data storage device 305):



Ex. 1003, Fig. 3 (annotated); *id.* 12:4-13, 13:36-14:13 (describing operation of “system controller”).

In addition, a POSA would have considered it obvious to couple Strub’s control unit 301 to an audio input port such as Nagai’s mike jack or Gleissner’s XLR

plug connector, described *supra* Element 1[D]; *see also* Ex. 1006, [0013] (advantages of standard microphone connector); Ex. 1002, ¶ 148.

Further, in the Lectrosonics IPRs, the Board found that Strub teaches storing the locally generated audio as audio data in the memory of the local audio device, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Specifically, the system controller 301 in Strub’s local audio device acquires locally generated audio via audio data acquisition device 303 and stores the audio in memory—*i.e.*, data storage device 305. Ex. 1003, 12:10-21, Fig. 3.

Woo’s system also stores—*i.e.*, records—locally generated audio in a memory as audio data. Ex. 1004, 4:62-64, 5:1-5 (“A recorder 14 captures [a live] performance....”), 5:37-45 (“recordings” stored within recorders 14 and 16); Ex. 1002, ¶ 159.

(8) **1[G]: “wherein said local audio data includes stamped local audio data and unstamped local audio data;”**

In the Lectrosonics IPRs, the Board found that Strub teaches a “local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory,” a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

The system controller 301 in Strub’s local audio device “can include a clock that is used to time-stamp the recording data obtained by the recording unit.” Ex.

1003, 13:50-58, 63:56-60. The time stamps comprise timecodes. *Id.* 6:65-7:24 (storing a “*time code* on the videotape”); 29:42-62 (records audio and visual data and “other types of data (e.g.,...*time codes*)”); 77:24-28 (identifying exemplary portable video recorders that “*write a time code to the linear data storage medium.*”); 78:7-40; 84:20-25. *See also* 63:12-49 (GPS time signals to “generate time-stamps for the recording data”).

Woo’s local audio device includes “a date and time tag unit 56 and a read only memory (ROM) 58.” Ex. 1004, 7:59-60, Fig. 3. “The ROM 58...includes an application program for generating SMPTE time codes....” *Id.* 8:21-22. In addition, Woo’s local audio device can employ “commercially-available time code generator 43” to generate time codes. *Id.* 7:28-29, Fig. 3. Date and time tag unit 56 provides time stamps, which are used to stamp at least a portion of the local audio data. *Id.*, 8:11-21, 8:25-44, Figs. 3, 4; *see also id.* 1:60-2:1, 5:37-45; Ex. 1002, ¶ 162.

In addition to stamped audio data, Strub’s local audio data includes unstamped audio data. For example, Strub provides an example in which a time-stamp indicates only “the time at which a displayed recording was obtained.” Ex. 1003, 13:54-56. A POSA would understand Strub’s reference to “the time at which a...recording was obtained” to refer to the time that the entire recording was completed—i.e., the time that either the first or final audio sample of the recording

was captured. Ex. 1002, ¶ 163. Thus, in that example, the time-stamp applies only to the first or final audio sample, whereas the other samples are unstamped.

In addition, a POSA would have been motivated, and would have considered it obvious, to stamp only the first or last sample in an audio recording in order to conserve transmission bandwidth, leaving the other samples unstamped. The time between samples in a digital recording is known. Thus, the timing of all samples easily can be reconstructed starting from the time-stamp associated with the first or last sample. Ex. 1002, ¶ 163.

Additionally, Strub teaches that the system controller can store information “that identifies *particular* stored recording data,” and gives the example of applying a “time-stamp” to the recording data, indicating that only particular audio data is stamped and other audio data is unstamped. Ex. 1003, 13:48-54 (emphasis added); Ex. 1002, ¶ 164.

(9) **1[H]: “wherein said stamped local audio data includes at least one first timestamp to reference at least a portion of said local audio data to at least one of said master timecodes; and”**

Strub discloses at least one timestamp to reference at least a portion of local audio data to at least one of the master timecodes, for instance applying GPS timestamps to the audio data. *See, e.g.*, Ex. 1003, 63:12-49 (recording unit using “GPS time signal” to “generate time-stamps for the recording data”).

Woo also discloses at least one first timestamp to reference at least a portion of local audio data to at least one of the master timecodes, including timecodes from GPS. *See* Ex. 1004, 8:25-36 (tagging first recording with date and time code information from satellite receiver). *See also id.*, 4:13-19, 4:45-48, 5:5-13, 7:26-35, 7:49-53, 9:33-39, 10:44-60, Figs. 2-4; Ex. 1002, ¶ 167.

(10) **1[I]: “wherein said unstamped local audio data does not include a reference to said master timecodes.”**

As discussed *supra* Element 1[G], Strub discloses unstamped audio, *e.g.*, audio samples other than the first or final sample for an obtained recording. Necessarily, these unstamped samples have no reference to a master timecode. Additionally and alternatively, Strub teaches that the local audio data may be stamped using locally generated timecodes, and therefore the local audio data would be referenced to local, rather than master, timecodes. *See* Ex. 1003, 13:52-58 (system controller 301 includes a local “clock that is used to time-stamp the recording data”), 63:56-60 (recording unit has local “internal clock” to time-stamp data); *see also* Ex. 1002, ¶ 165.

- b. **Claim 2: “A system according to claim 1, wherein said local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.”**

In the Lectrosonics IPRs, the Board found that Strub teaches adding a local audio device identifier and a performer identifier to the local audio data, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Strub’s local audio data can include one or more “marks” identifying a track, device, or performer. Ex. 1003, 52:19-33 (marks indicating subject matter or conditions or recorded track), 52:62-53:44 (marks identifying recording device, person making the mark, or “person present in the content”); Ex. 1002, ¶ 189.

- c. **Claim 3.**

(1) **3[A] & 3 [B]: “A system according to claim 1, said system further comprising: at least one remote control unit having an RCU transmitter capable of wirelessly transmitting digital commands; wherein said remote control unit controls at least one function of said local audio devices via transmission of at least one of said digital commands; and”**

Strub meets the additional limitations of Claim 3. For example, Strub teaches that “control interface device...[can] be implemented to enable wireless communication...between the control interface device...and the remainder of the recording unit[s].” *Id.*, 47:41-48. Strub teaches that the control interface device is remote and separate from the recording unit. *Id.* 47:25-32, 46:18-24, 46:54-56, 47:2-9. The control interface device transmits, and the system controller (*i.e.*, control

unit) is operable to receive, “instructions” (*i.e.*, commands). *Id.* 45:52-65, 47:49-50.

“[T]he control interface device enables the recorder to control operation of the recording unit. [It] includes...mechanisms (*e.g.*, pushbutton, switch) for enabling the recorder to start and stop operation of the recording unit.” *Id.*, 47:49-53. *See also id.* 47:50-63, 48:5-17, 49:4-14, 49:23-31, 49:46-55, 57:25-32. The commands are received by the system controller 301 (control unit) of the recording unit. *Id.* 45:56-46:5. Further, Strub teaches that the control interface unit may communicate wirelessly. *Id.* 47:41-47; *see also id.* 68:11-19, 70:38-46, Fig. 7; Ex. 1002, ¶ 210.

(2) **3[C]: “wherein said function includes at least one of the group consisting of ... [adding/deleting/altering] said local audio device identifier ... [adding/deleting/altering] said performer identifier ... and combinations thereof.”**

Strub meets this element. Strub teaches that “[t]he control interface device can also be implemented so as to enable specification of multiple types of marks, each mark having a different meaning,” *id.* at 51:32-34, and that such marks can be a local audio device identifier, a user identifier, or a performer identifier. *See id.* at 52:62-53:44. Ex. 1002, ¶ 211.

d. **Claim 6.**

(1) **Claim 6: “A system according to claim 1, wherein said master timecode includes at least one of the group consisting of time data, frame data, timecode type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.”**

In the Lectrosonics IPRs, the Board found that Strub teaches master time data including hour, minute, and/or second data—*i.e.*, a master timecode which includes time data—a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

For example, the local timecodes generated by the internal clock in each of Strub’s local audio devices comprise time-stamps—*i.e.*, time data. Ex. 1003, 13:48-67 (“clock...used to time-stamp the recording data”), 63:56-60, 77:24-28 (“time code...indicating ***the time at which corresponding recording data was obtained.***”), 7:11-24, 79:63-80:9, Fig. 3; *see also supra* 1[A]. Strub also discloses including a track identifier in the local timecode used to stamp the audio data. *See supra* Claim 2. In addition, Strub discloses monitoring recorder transport status—*e.g.*, “whether the recording unit is transmitting or not.” Ex. 1003, 48:18-41.

Strub’s master timecodes comprise GPS time data and/or SMPTE timecodes. *See supra* 1[A]. SMPTE timecodes include time data—specifically, “twenty-six [bits of a SMPTE timecode] are used to store time information.” Ex. 1004 (Woo), 3:20-22.

Woo's local timecode generator 43 and CPU 44 running the timecode-generation program stored in ROM 58 both generate SMPTE local timecodes, which include time data, based on timing information received from a GPS satellite. *See supra* 1[A], 1[C]; *see also* Ex. 1004, 1:21-40, 2:3-9, 2:42, 3:20-22, 4:13-19; 7:26-50.

The master timecodes that Woo uses to synchronize its local timecode generator 43 are received from GPS satellites 26-28. *See supra* 1[A], 1[C]. The GPS signals include time data. Ex. 1004, 4:13-19, 5:5-10, 5:21-29, 7:18-25, Figs. 2, 4; *see also* Ex. 1002, ¶ 194.

e. **Claim 13.**

Challenged Claim 13 depends upon Claim 12. In the Lectrosonics IPRs, the Board found that “claim 12 of the '902 patent is unpatentable under 35 U.S.C. § 102(e) as anticipated by Strub.” Ex. 1017 at 41. *See also supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

(1) **12[Pre]: “A method of wirelessly recording local audio, said method comprising:”**

This element is taught by Strub and Woo. *See supra* 1[Pre].

(1) **12[A]: “locally receiving said local audio generated by at least one performer during an audio event;”**

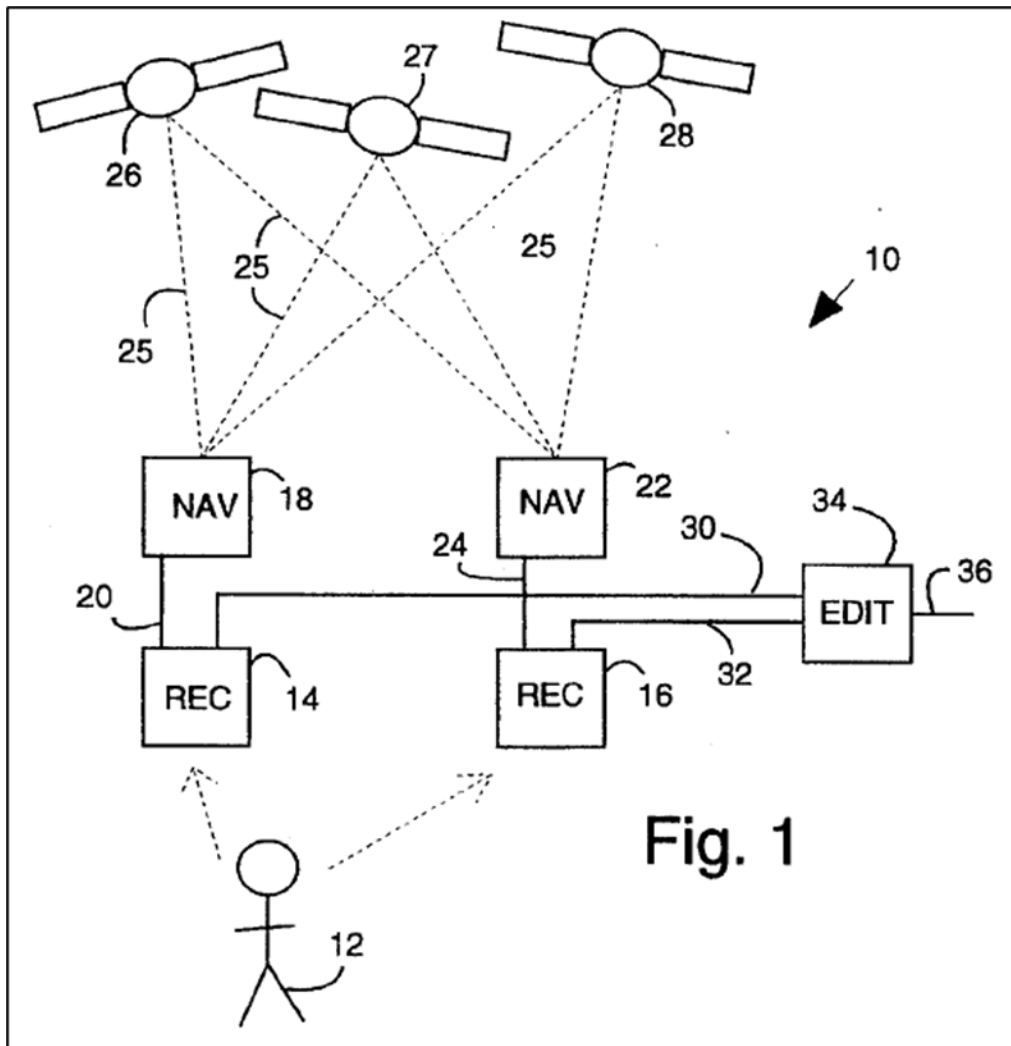
This element is taught by Strub, Woo, Nagai, and Gleissner. *See supra* 1[B] and 1[D].

(1) **12[B]: “wirelessly transmitting said local audio to at least one of the group consisting of a recorder, a receiver, and combinations thereof;”**

In the Lectrosonics IPRs, the Board found that Strub teaches “a local audio device that records [(i.e., stores)] local audio and transmits the local audio to other remote devices” and “that the same local audio is stored at both the wearable local audio device as local audio data and the remote receiver/recorder as remotely recorded audio data.” *See supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

Each of Strub’s recording units is wearable by a user and is for storing locally generated audio and transmitting the locally generated audio to a remote device—*e.g.*, a different one of recording units 105-108, 200, and 300. *See* Ex. 1003, 8:10-29, 8:50-53, 11:32-50, 12:13–21, 12:31–39 (“[T]ransmitter 309 transmits signals...representing recording data acquired by the recording unit 300” to “other recording units.”), 25:35–49, 35:54–65, 37:18–40, 38:1–4, Figs. 1 (recording units 105-108), 2 (recording unit 200), 3 (recording unit 300); *see generally id.* 35:53-38:39 (“Communication Between Recording Units”). The remote recording unit receives the transmitted audio data via a receiver and records it. *Id.* 35:54-65, 37:18-40.

This element is also taught by Woo. Woo's system includes at least one local audio device which stores locally generated audio and transmits it to a remote recorder—editing station 34, as depicted in Figs. 1 and 3:



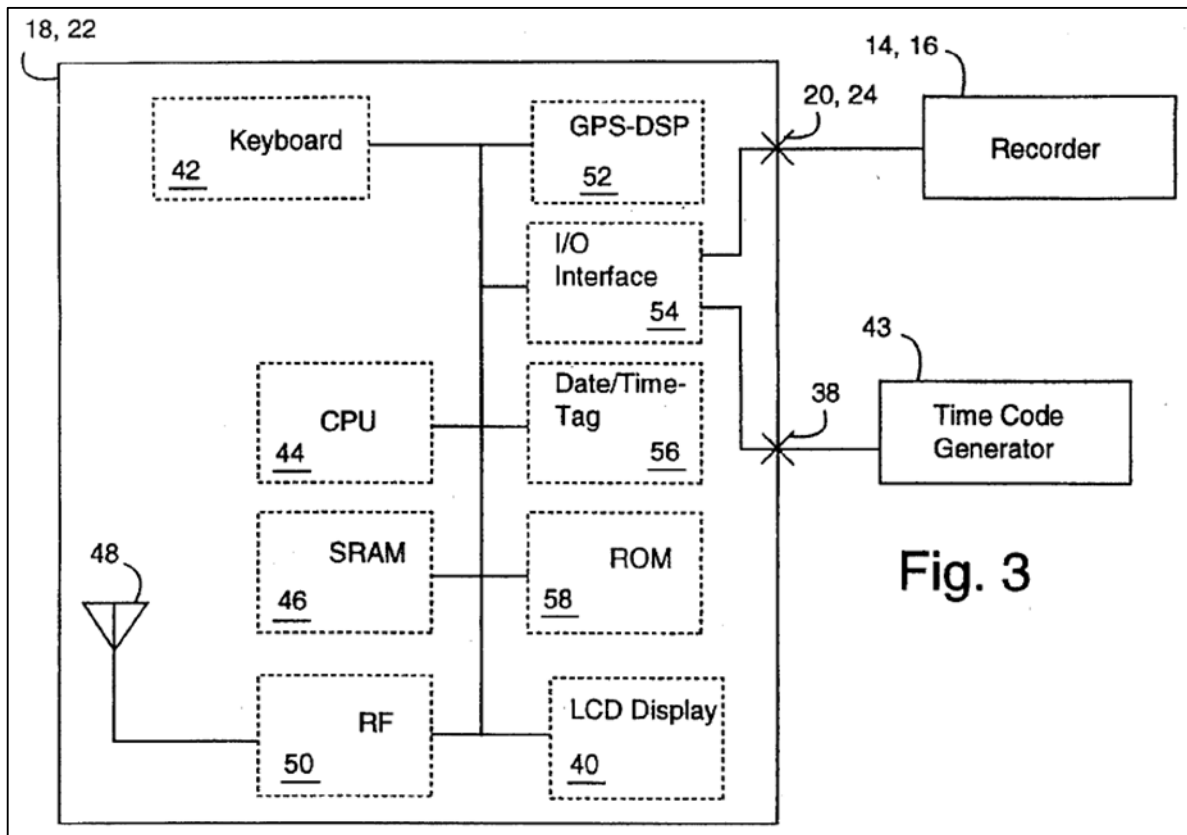


Fig. 3

See also Ex. 1004, 5:3-5 (“recorder 14 captures [a] performance from its vantage point while another recorder 16 independently captures the same performance from its own vantage point.”), 5:37-49, 8:32-44, 9:40-43, 9:56-62, Figs. 1, 3-4. Communication between the local audio devices and the remote recorder are illustrated in Fig. 1. Ex. 1002, ¶¶ 123.

(1) **12[C]: “locally recording said local audio as local audio data in at least one memory of at least one local audio device; and”**

This element is taught by Strub, Woo, Nagai, and Gleissner. See *supra* 1[E] and 1[F].

(1) **12[D]: “remotely recording said transmitted local audio via at least one of the group consisting of a recorder, a receiver, and combinations thereof as remote audio data;”**

This element is taught by Strub and Woo. *See supra* 12[B]. Specifically, Strub’s remote recording unit receives the transmitted audio data via a receiver (“receiver”) and records it. Ex. 1003, 35:54-65 (“each recording unit can include a receiver that enables receipt of signals broadcast from other recording units that represent the recording data”), 37:18-40. In addition, Woo’s system includes at least one local audio device which stores locally generated audio and transmits it to a remote recorder—editing station 34, as depicted in Ex. 1004, Figs. 1 and 3. *See also* Ex. 1002, ¶ 215.

(1) **12[E]: “wherein at least a portion of said local audio data is retrieved during or subsequent to said audio event and is combined with said remote audio data;”**

Strub discloses retrieving at least a portion of said local audio data during or subsequent to said audio event. *See* Ex. 1003 12:4-39, 66:7-25 (audio data retrieved by transmitting the data to other devices via transmitter or wired connections).

Further, Strub discloses combining said remote audio data with said local audio data by replacing a portion of said remote audio data with said local audio data. *See id.* 37:18-40 (recorders “exchange recording data after the event is over”), 85:28-41; 87:61-63. In addition, Strub discloses “[t]he time-stamps can be used...

to enable post-event synchronization of the display of recordings obtained by different recording units.” Ex. 1003, 13:50–67.

In addition, Woo teaches using software and timecode information to synchronize and “blend” two different recordings from different microphones to generate a third, composite recording which is a combination of the first two. Ex. 1004, 8:44-51 (“[S]tep 114 combines the first and second recordings, according to a synchronization between the first and second date and time code information. A step 116 generates a third recording from the date and time synchronized portions.”), 9:65-5, 10:1-5, 11:12-16 (“editing means...for combining said first and second recording mediums according to said recorded formatted digital time codes to create a time-synchronized composite recording.”), 12:11-14. Woo provides alternative examples in which the combining is done either in post-processing or in real time. *See id.*, 8:51-54, 10:7-10, 10:12-14. Moreover, Woo teaches synchronizing clocks of recording units so that recordings can later be combined by aligning time stamps. *See id.*, 3:38-67. *See also* Ex. 1002, ¶ 218.

(1) **12[F]: “wherein said local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.”**

This element is taught by Strub. *See supra* Claim 2.

(1) **13[Pre]: “A method according to claim 12, said method further comprising the step of:”**

See supra 12[Pre]–12 [F].

(1) **13[A]: “locally receiving or generating a plurality of master timecodes;”**

This element is taught by Strub and Woo. *See supra* 1[A].

(1) **13[B]: “wherein said local audio data includes stamped local audio data and unstamped local audio data;”**

This element is taught by Strub and Woo. *See supra* 1[G].

(1) **13[C]: “wherein said stamped local audio data includes at least one first timestamp to reference at least a portion of said local audio data to at least one of said master timecodes;”**

This element is taught by Strub and Woo. *See supra* 1[H].

(1) **13[D]: “wherein said unstamped local audio data does not include a reference to said master timecodes;”**

This element is taught by Strub and Woo. *See supra* 1[I].

(1) **13[E]: “wherein said master timecode includes at least one of the group consisting of time data, frame data, timecode type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.”**

Element 13[E] is identical to the limitation of Claim 11. In the Lectrosonics IPRs, the Board found that “claim[...]11 of the ’902 patent [is] unpatentable under 35 U.S.C. § 103(a) as obvious [over] Strub in combination with Nagai or Gleissner, and Woo.” Ex. 1017 at 35. *See also supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

In addition, while this element requires only “at least one of the group,” Strub teaches master timecodes that include at least time data (Ex. 1003, 12:39-52, 63:12-15, 70:26-37, 75:25-51, Fig. 3), frame data (14:15-25), timecode type (4:7-13), recorder status (48:18-41), and track identifier (52:19-33).

Moreover, Woo teaches a master timecode including at least time data. See Ex. 1004, Abstract, 1:21-40, 1:60-2:9, 2:39-48, 3:3-24, 4:3-32; 7:26-50; *see also* Ex. 1002, ¶ 227.

f. **Claim 16.**

Claim 16 depends upon Claims 12 and 15. In the Lectrosonics IPRs, the Board found that “claim 12 of the ’902 patent is unpatentable under 35 U.S.C. § 102(e) as anticipated by Strub” and that “claim[...15 of the ’902 patent [is] unpatentable under 35 U.S.C. § 102(e) as anticipated by Strub” Ex. 1017 at 41. See *also supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

(1) **15[Pre]: “A method according to claim 12, further comprising:”**

See supra 12[Pre]–2[F].

(1) **15[A]: “manipulating said local audio data contained in at least a portion of said memory;”**

Strub discloses said memory. See *supra* 1[E]. Strub further discloses at least the following manipulation of audio data: transmitting digital commands (Ex. 1003,

47:49-63), adding a track identifier (52:19-33), adding marks identifying a particular recording unit (52:62-53:15), and adding marks identifying the performer and people present in a recording (53:16-44).

In addition, Woo teaches manipulating said local audio data contained in at least a portion of said memory, including at least “editing sessions” and that “[t]ime codes may also be used for film editing, film on tape editing, and many other tasks.” Ex. 1004, 1:36-2:9; *see also, id.*, 5:36-52 (describing use of an editing station); Ex. 1002, ¶ 230.

(1) **15[B]: “wherein said manipulation includes at least one of the group consisting of [adding/deleting/altering] said track identifier... [adding/deleting/altering] said local audio device identifier...[adding/deleting/altering] said performer identifier...and combinations thereof.”**

This element is taught by Strub and Woo. *See supra* 15[A].

(2) **Claim 16: “A method according to claim 15, wherein said manipulation is performed via commercially available software.”**

This element is taught by Strub and Woo. *See supra* 15[A]-15[B].

In addition, commercially available software for said manipulating was well known to a POSA. For example, the '902 Patent discloses that “electronic mixing may be performed via [third-party] commercially available software such as Pro Tools or the like and may be performed in addition to or in lieu of live wireless recording of the audio event.” Ex. 1001, 10:48-52.

Commercially available software such as Avid Media Composer discloses multiple ways of editing audio or video. *See* Ex. 1033. For example, Avid Media Composer describes “single-mark editing,” which allows users to “establish a single mark,” and discloses using SMPTE timestamps to mark audio and video data. *Id.*, 342, 146, 321 (typing “SMPTE timecode[s]” “to find a frame in the sequence”). In addition, commercially available Short/cut 2000 software similarly discloses multiple ways of editing audio or video. *See, e.g.*, 1034 *See also* Ex. 1002, ¶ 234.

B. Ground 2: Claims 4, 5, 9, and 10 are Rendered Obvious Under § 103 By the Combination of Strub, Woo, Nagai, Gleissner, and Jones

1. A POSA Would have Been Motivated to Combine Strub, Woo, Nagai, Gleissner, and Jones

As previously discussed, a POSA would have been motivated to combine Strub, Woo, Nagai, and Gleissner. *See supra* § IX.A.1. In addition, the teachings of Strub, Woo, Nagai, Gleissner, and Jones provide substantial motivation to combine them.

Furthermore, every element of Challenged Claims 4, 5, 9, and 10 appears in Strub, Woo, Nagai, Gleissner, and/or Jones. *See infra* § IX.B.2. Those elements are standard method steps using well-known, off-the-shelf audio-recording and radio components that would be familiar to any POSA. Ex. 1002, ¶ 252. For example, devices like Jones’ multi-flash-card reader were common and well-known as of the priority date of the patents. A POSA would have been familiar with advantages of

such devices, such as, *e.g.*, providing the flexibility of interfacing different types of memories with electronic devices such as audio recorders. *See, e.g.*, Ex. 1010, 1:20-23, 2:25-60, 3:8-55; Ex. 1002, ¶ 252. There is nothing unpredictable about the claimed use of those components in a wireless audio-recording system. Ex. 1002, ¶ 252; *see KSR*, 550 U.S. at 417 (non-obviousness requires “more than the predictable use of prior art elements according to their established functions.”). Furthermore, the technology and operation of such components was well-understood in the relevant time period such that the combination of Strub, Woo, Nagai, Gleissner, and Jones would have had a high likelihood of success. Ex. 1002, ¶ 252.

Thus, since Strub and Woo teach the same kind of device used for the same purpose, since each of them identified the same problem identified in the '902 Patent and solved it in the same way, since the microphone jacks and plugs of Nagai and Gleissner and the multi-slot memory unit of Jones were old elements performing the same function they had always been known to perform, since audio input ports in general have been known for over a century, since the combination of elements in the Challenged Claims is nothing more than “the predictable use of prior art elements according to their established functions,” and since the combination of Strub, Woo, Nagai, Gleissner, and Jones would have had a high likelihood of success, a POSA would have been motivated to combine Strub, Woo, Nagai, Gleissner, and Jones.

2. **The Combination of Strub, Woo, Nagai, Gleissner, and Jones Meets All Elements of Challenged Claims 4, 5, 9 and 10**

As discussed below, the Preambles and every element of Claims 4, 5, 9, and 10 are taught by Strub, Woo, Nagai, Gleissner, and/or Jones. To the extent Patent Owner alleges that any of those references fails to teach any claim element, that element is provided by the other references. Further, to the extent the teachings of any of Strub, Woo, Nagai, Gleissner, and/or Jones are substantively different for any given claim element, it would have been at least obvious to try the other references' implementation of that element, given the overall similarity in their purpose, design and operation.

a. **Claim 4.**

(1) **4[A]: "A system according to claim 1, said system further comprising: a multi-memory unit including:"**

Element Claim 4[A] is taught by Strub, Woo, Nagai, and/or Gleissner. See *supra* 1[Pre]–1[I].

In addition, Jones teaches multiple examples of a multi-memory unit—*e.g.*, flash reader 42, flash reader within computer 20, and "FlashToaster" 80—each including at least one memory unit interface—*e.g.*, connectors 62, 64, 66, 68—for connection to at least a portion of a memory—*e.g.*, memory cards 16, 18, 24, and 28. Ex. 1010, 9:56-10:3 (describing "multi-slot embodiment of the flash-card reader [42]."), 10:4-29 ("[S]eparate slots in flash reader 42 allows for card-to-card

transfers....Each of the flash memory cards...can be assigned a different drive letter by the operating system.”), 10:30-12:25, Figs. 6A-9; *see also* Ex. 1002, ¶ 256.

(2) **4[B]: “at least one memory unit interface for connection to at least a portion of said memory; and”**

Jones teaches at least one memory unit interface for connection to at least a portion of said memory. *See, e.g.*, Ex. 1010, Abstract (“The flash card reader includes an Integrated Device Electronics (IDE) interface for transferring data to a personal computer.”); Ex. 1002, ¶ 257.

(3) **4[C]: “a user interface for manipulating said local audio data contained in said at least a portion of said memory;”**

Strub teaches manipulating said local audio data contained in at least a portion of said memory. *See supra* 15[A]. Strub further teaches a user interface for said manipulating. *See, e.g.*, Ex. 1003, 46:10-33; 58:8-14 (“A control interface device in a recording unit...can also include a control interface display for enabling the recorder to input control instructions to the recording unit.”); 58:44-56 (“control interface display...makes use of graphical user interface...that allow the recorder to specify instructions 50 regarding any of the above-described control functions.”); 51:32-56 (control interface device “enable[s] specification of multiple types of marks, each mark having a different meaning.”); *see also* Ex. 1002, ’902 Patent Element 15[A] ¶¶ 229-230, 258.

(4) **4[D]: “wherein said manipulation includes at least one of the group consisting of [adding/deleting/altering] said track identifier ... [adding/deleting/altering]said local audio device identifier ... [adding/deleting/altering]said performer identifier ... and combinations thereof.”**

Strub teaches said manipulating. *See supra* 15[A] and 4[C]. *See also*, Ex. 1003, 51:32-56. Strub further discloses at least the following manipulation of audio data: transmitting digital commands (*id.*, 47:49-63), adding a track identifier (52:19-33), adding marks identifying a particular recording unit (52:62-53:15), and adding marks identifying the performer and people present in a recording (53:16-44). *See* Ex. 1002, ¶ 259.

b. **Claim 5: “A system according to claim 4, wherein said manipulation is performed via commercially available software.”**

This element is taught by Strub and Woo, and by commercially-available software, such as Pro Tools. *See supra* 15[A]-[B], 16. *See also* Ex. 1002, ¶ 261.

a. **Claim 9.**

Claim 9 depends upon Claim 7. In the Lectrosonics IPRs, the Board found that “independent claim 7 of the ’902 patent is unpatentable under 35 U.S.C. § 103(a) as obvious over Strub in combination with Nagai or Gleissner, and Woo.” Ex. 1017 at 35. *See also supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

(1) **7[Pre]: “A system for recording locally generated audio comprising:”**

This element is taught by Strub and/or Woo. *See supra* 1[Pre]. Ex. 1002, ¶ 262.

(2) **7[A]: “at least one master timecode generator for generating a plurality of master timecodes; and”**

This element is taught by Strub and/or Woo. *See supra* 1[A]; Ex. 1002, ¶ 263.

(1) **7[B]: “at least one local audio device wearable by a creator of said locally generated audio including:”**

This element is taught by Strub and/or Woo. *See supra* 1[B]; Ex. 1002, ¶ 264.

(2) **7[C]: “at least one local audio device receiver for receiving at least one of the group consisting of digital commands and said master timecodes;”**

This element is taught by Strub and/or Woo. *See supra* 1[C]; Ex. 1002, ¶ 265.

(3) **7[D]: “at least one audio input port for receiving locally generated audio from an audio input device;”**

This element is taught by Strub, Nagai, Gleissner, and/or Woo. *See supra* 1[D]; Ex. 1002, ¶ 266.

(4) **7[E]: “at least one memory;”**

This element is taught by Strub. *See supra* 1[E]; Ex. 1002, ¶ 267.

(5) **7[F]: “at least one local timecode generator for generating a plurality of local timecodes; and”**

In the Lectrosonics IPRs, the Board found that Strub teaches a local timecode generator, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

In particular, Strub’s local audio device (a recording unit) includes a local timecode generator—an internal clock—that generates a timecode—*e.g.*, a signal indicating the time—used to timestamp the recording data. Ex. 1003, 13:52-56, 63:56-60, 79:54-80:9, Fig. 3.

Woo’s local audio device includes a local time code generator 43 that generates SMPTE timecodes. *See supra* 1[A]; Ex. 1004, 7:28-37, Fig. 3, 3:3-40. In addition, Woo’s local audio device has a CPU 44 (local timecode generator) which executes “an application program for generating SMPTE time codes...” *Id.* 8:8-9, 8:21-22, Fig. 3. Ex. 1002, ¶ 270.

(6) **7[G]: “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory;”**

In the Lectrosonics IPRs, the Board found that Strub teaches “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator,” a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

In addition, this element is taught by Strub, Gleissner, and/or Woo. *See supra* 1[F]; Ex. 1002, ¶ 272.

(7) **7[H]: “wherein said stamped local audio data includes at least one local timestamp to reference at least a portion of said stamped local audio data to at least one of said local timecodes; and”**

Strub discloses at least one first timestamp to reference at least a portion of stamped local audio data to at least one of the local timecodes. In particular, Strub’s local audio device (a recording unit) has an internal clock and a GPS receiver, each of which comprises a local timecode generator operable to generate a plurality of local timecodes to be applied to the local audio data. *See, e.g.*, Ex. 1003, 62:26-63:50, 75:25-57.

Woo also discloses at least one first timestamp to reference at least a portion of stamped local audio data to at least one of the local timecodes. *See, e.g.*, Ex. 1004, 4:13-19, 4:45-48, 5:5-10, 5:21-29, 5:54-67, 7:18-47, 7:48-9:19, 9:33-39, 9:45-55, 10:15-64, Figs. 2-4; Ex. 1002, ¶ 274.

(8) **7[I]: “wherein said stamped local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.”**

In the Lectrosonics IPRs, the Board found that Strub teaches adding a local audio device identifier and a performer identifier to the local audio data, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Specifically, Strub's local audio data can include one or more "marks" identifying a track, device, or performer. Ex. 1003, 52:19-33 (marks indicating subject matter or conditions or recorded track), 52:62-53:44 (marks identifying recording device, person making the mark, or "person present in the content"); Ex. 1002, ¶ 276.

(9) **Claim 9[Pre]: "A system according to claim 7, said system further comprising:"**

This element is taught by Strub, Nagai, Gleissner, and/or Woo. *See supra* 7[Pre]–7[I]). *See also* Ex. 1002, ¶ 277.

(10) **Claim 9[A]: "a multi-memory unit including:"**

This element is taught by Jones. *See supra* 4[A]; Ex. 1002, ¶ 278.

(11) **Claim 9[B]: "at least one memory unit interface for connection to at least a portion of said memory; and"**

This element is taught by Jones. *See supra* 4[B]; Ex. 1002, ¶¶ 279.

(12) **Claim 9[C]: "a user interface for manipulating said local audio data contained in said at least a portion of said memory;"**

This element is taught by Strub. *See supra* 4[C]; Ex. 1002, ¶¶ 280.

(1) **Claim 9[D]: "wherein said manipulation includes at least one of the group consisting of [adding/deleting/altering] said track identifier...[adding/deleting/altering] said local audio device identifier...[adding/deleting/altering] said performer identifier...and combinations thereof."**

This element is taught by Strub. *See supra* 4[D]; Ex. 1002, ¶ 281.

a. **Claim 10.**

Challenged Claim 10 depends upon Claim 9, which depends on Claim 7. In the Lectrosonics IPRs, the Board found that “independent claim 7 of the ’902 patent is unpatentable under 35 U.S.C. § 103(a) as obvious over Strub in combination with Nagai or Gleissner, and Woo.” Ex. 1017 at 35. *See also supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.* In addition, the elements of Claims 7 and 9 are taught by Strub, Woo, Nagai, Gleissner, and/or Jones. *See supra* 7[Pre]–7[I] and 9[Pre]–9[C].

(1) **Claim 10: “A system according to claim 9, wherein said manipulation is performed via commercially available software.”**

This element is taught by Strub and Woo, and by commercially-available software, such as Pro Tools. *See supra* 15[A]–[B], 16; *see also* Ex. 1002, ¶ 282.

C. **Ground 3: Claims 17-20 Are Rendered Obvious Under § 103 By the Combination of Strub and Woo**

1. **A POSA Would have Been Motivated to Combine Strub and Woo**

In the Lectrosonics IPRs, the PTAB found that a POSA would have motivated to combine Strub and Woo and that the combination would have been obvious. *See Supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

In addition, a POSA would have been motivated to combine Strub and Woo. *See supra* § IX.A.1.

2. **The Combination of Strub and Woo Meets All Elements of Challenged Claims 17-20**

As discussed below, the Preambles and every element of Claims 17-20 are taught by Strub and Woo. To the extent Patent Owner alleges that either of those references fails to teach any claim element, that element is provided by the other reference. Further, to the extent the teachings of any of Strub or Woo are substantively different for any given claim element, it would have been at least obvious to try the other references' implementation of that element, given the overall similarity in their purpose, design and operation.

a. **Claim 17.**

(1) **17[Pre]: "A method of recording local audio, said method comprising the steps of:"**

This element is taught by Strub and Woo. *See supra* 1[Pre]; Ex. 1002, ¶ 286.

(2) **17[A]: "locally receiving said local audio generated by at least two performers during an audio event;"**

This element is taught by Strub and Woo. *See supra* 1[B] and 1[D]. *See also* Ex. 1002, ¶ 287.

(3) **17[B]: "locally recording said local audio as local audio data in at least one memory of at least one local audio device; and"**

This element is taught by Strub and Woo. *See supra* 1[B], 1[D], and 1[E]. *See also* Ex. 1002, ¶¶ 288.

(4) **17[C]: “locally receiving or generating a plurality of master timecodes;”**

This element is taught by Strub and Woo. *See supra* 1[A], 1[C], 7[F]; Ex. 1002, ¶ 289.

(5) **17[D]: “wherein said local audio data for each of said performers is retrieved from said local audio devices subsequent to said audio event and is combined to create a single multi-track audio file;”**

This element is taught by Strub and Woo. *See supra* 12[E]. In addition, Woo teaches using software and timecode information to synchronize and “blend” two different recordings from different microphones to generate a third, composite recording which is a combination of the first two. *See supra* 12[E]; Ex. 1002, ¶ 290.

(6) **17[E]: “wherein said local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof;”**

This element is taught by Strub. *See supra* Claim 2. *See also* Ex. 1002, ¶ 291.

(7) **17[F]: “wherein said local audio data includes stamped local audio data and unstamped local audio data;”**

This element is taught by Strub and Woo. *See supra* 1[G]; Ex. 1002, ¶ 292.

(8) **17[G]: “wherein said stamped local audio data includes at least one first timestamp to reference at least a portion of said local audio data to at least one of said master timecodes;”**

This element is taught by Strub and Woo. *See supra* 1[H]; Ex. 1002, ¶ 293.

(9) **17[H]: “wherein said unstamped local audio data does not include a reference to said master timecodes; and”**

This element is taught by Strub and Woo. *See supra* 1[I]; Ex. 1002, ¶ 294.

(10) 17[I]: “wherein said master timecode includes at least one of the group consisting of time data, frame data, timecode type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.”

This element is taught by Strub and Woo. *See supra* 13[E]; Ex. 1002, ¶ 295.

b. Claim 18.

(1) 18[A]: “A method according to claim 17, further comprising: remotely controlling at least one function of at least one of said local audio device via at least one remote control unit;”

This element is taught by Strub. *See supra* 3[A]-3[B]; Ex. 1002, ¶ 296.

(2) 18[B]: “wherein said function includes at least one of the group consisting of [adding/deleting/altering] said track identifier ... [adding/deleting/altering] said local audio device identifier ... [adding/deleting/altering] said performer identifier ... and combinations thereof.”

This element is taught by Strub. *See supra* 3[C]; Ex. 1002, ¶ 297.

c. Claim 19.

(1) 19[A]: “A method according to claim 17, further comprising: manipulating said local audio data contained in at least a portion of said memory;”

This element is taught by Strub. *See supra* 15[A]; Ex. 1002, ¶ 298.

(2) 19[B]: “wherein said manipulation includes at least one of the group consisting of [adding/deleting/altering] said track identifier ... [adding/deleting/altering] said local audio device identifier ... [adding/deleting/altering] said performer identifier ... and combinations thereof.”

This element is taught by Strub. *See supra* 15[B]; Ex. 1002, ¶ 299.

- d. **Claim 20. “A method according to claim 19, wherein said manipulation is performed via commercially available software.”**

This element is taught by Strub and Woo, and by commercially-available software, such as Pro Tools. *See supra* 15[A]-[B], 16; *see also* Ex. 1002, ¶ 300.

D. No Relevant Secondary Considerations

Petitioner is not aware of any secondary considerations which would impact the obviousness analysis of Grounds 1-3.

X. DISCRETIONARY DENIAL IS NOT WARRANTED

A. Section 325(d)

Institution denial based on 35 U.S.C. §325(d) is unwarranted because the arguments and evidence presented here were not previously and/or properly considered. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”), *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17-18 (PTAB Dec. 15, 2017) (precedential as to §III.C.5, first paragraph).

1. Advanced Bionics Part One

Strub, Woo, Nagai, Gleissner, and Jones were neither before the Examiner nor are “substantially the same” as the prior art considered by the Examiner. *Advanced Bionics*, Paper 6 at 13-19. The only reference that the Examiner considered substantively was U.S. Patent 6,678,501 (“Valeski”). Ex. 1035 at 3-4. The

Examiner never asserted, *e.g.*, that Valeski discloses a local device that receives a master timecode from a master timecode generator and stamps local audio data with a timestamp referencing at least a portion of the local audio data to the master timecode, as in Strub and Woo. *See id.*; *see also supra* Ground 1, Elements 1[H], 7[H][, 13[C], 17[G]. Nor are any of those limitations present in Valeski.

2. **Advanced Bionics Part Two**

Since Strub, Woo, Nagai, Gleissner, and Jones were not before the USPTO during prosecution of the '902 Patent and are not substantially the same as the art that was before the USPTO, Petitioner's arguments presented herein cannot be the same or substantially the same as those previously presented to the Office during prosecution.

Strub, Woo, Nagai, and Gleissner were considered by the PTAB in the Lectrosonics IPRs, but in those earlier proceedings the Board found claims similar to the present Challenged Claims unpatentable over those references. *See Supra* § VI.D. In contrast, the only claims **not** found unpatentable in the Lectrosonics IPRs included the limitation "replacing...[remote/remotely recorded] audio data with...local audio data." Ex. 1014 at 64 (Claims 1-14 unpatentable over Strub, Nagai, and Gleissner and replaced by substitute Claims 15-28); Ex. 1015, IPR Certificate, 1:30-31, 2:28-30; Ex. 1017 at 73 (Claims 7, 8, 11, 12, 14, and 15 unpatentable over Strub, Nagai, Gleissner, and Woo and replaced by substitute

Claims 21-26); Ex. 1001, IPR Certificate, 1:41-43, 2:32-33; Ex. 1018 at 6 n.6, 63 (Claims 1-4, 9, 10, 12, 15, 31, 36, 37, and 41-44 unpatentable over Strub, Nagai, Gleissner, and Woo; Claim 45 (reciting storage of timecode-associated data in file header) unpatentable over those references plus Dwyer (U.S. Pat. 6,571,211); replaced by substitute Claims 50-65); Ex. 1028 IPR Certificate, 1:41-43). That limitation does not appear in any Challenged Claim in the present case.

Thus, since the USPTO's only substantive consideration of any of the presently presented prior art resulted in unpatentability and cancelation of claims similar to the Challenged Claims, this factor weighs strongly against discretionary denial.

B. Section 314(a)

Under the Director's Interim Procedure for Discretionary Denials (June 21, 2022) ("IP"), "the PTAB will not deny institution based on *Fintiv* if there is compelling evidence of unpatentability" (IP, 5), which this Petition provides. The *Fintiv* factors favor institution based on efficiency, fairness, and patent quality. *Apple v. Fintiv*, IPR2020-00019, Paper 11 at 5 (Mar. 20, 2020) ("*Fintiv*") (precedential).

1. Stay Potential

Petitioner intends to seek a stay of the district court litigation, but without "specific evidence" how the court will rule, this factor is neutral. *Sand Revolution*

II v. Continental Intermodal Group—Trucking, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative).

2. **Trial Timing and Diligence**

Institution approximately six months from Petition filing would result in an FWD by June 2026. The district court in the Delaware Litigation has not yet set a trial date, but the final summary judgment and Daubert briefs are not due until April 10, 2026. Ex. 10313. Thus, it is extremely unlikely that trial will start in or before June 2026. Rather, there is a significant probability that the Court will not even issue its summary judgment and Daubert rulings, let alone start the trial, until June 2026 or later. Trial will not occur until substantially after the FWD.

Furthermore, Petitioner plans to seek a stay of the Delaware Litigation during the pendency of this IPR, which is likely to be granted, pushing the trial date back even further after the FWD, as the District of Delaware has historically granted requests to stay pending IPR that were filed after the institution decision. See *Ethicon LLC v. Intuitive Surgical, Inc.*, No. 17-871-LPS, 2019 WL 1276029, at *1-3 (D. Del. Mar. 20, 2019); *Bio-Rad Labs. Inc. v. 10X Genomics, Inc.*, No. 18-1679-RGA, 2020 WL 2849989, at *1-2 (D. Del. June 2, 2020); *NEC Corp. v. Peloton Interactive, Inc.*, No. 22-987-CJB, 2024 WL 1533952, at *1-3 (D. Del. Apr. 9, 2024). Thus, Factor 2 weighs against discretionary denial. *Fintiv*, at 9.

3. **Litigation Investment**

In the Delaware Litigation, fact discovery does not end until August 2025, claim construction and expert discovery have not even begun, Ex. 1031 at 3, a trial date has not been set, *id.*, and no substantive orders have been issued related to the patents-in-suit, facts that weigh against discretionary denial. *Fintiv*, at 9-10. Thus, this factor weighs against discretionary denial.

4. **Issue Overlap**

Although all of the Challenged Claims are currently being asserted in the Delaware Litigation, that is at least partly because Zaxcom is asserting 140 claims and has refused to narrow its list of claims at this time. Ex. 1032 The Court recently issued a revised scheduling order which requires Zaxcom to reduce its asserted claims in two phases, one before the claim construction proceeding and one after the claim construction ruling. In addition, Petitioner is concurrently filing IPR Petitions on the '443 and '207 Patents. Collectively, the three related IPR Petitions challenge a total of 38 claims, which is itself too many to present to a jury, and that does not even include the other four patents-in-suit, which are not subject to the IPR Petitions filed today. Thus, it is highly likely that many of the Challenged Claims will not be asserted in the Delaware Litigation. This weighs against discretionary denial, because “[t]he IPR trial will impact the integrity of the patent system positively by

considering material issues not raised in the District Court Action.” *Seven Networks*, Paper 10 at 17, 19; *Fintiv*, at 12-13.

5. **Litigation Parties**

This Petition involves the same parties as the Delaware Litigation, so this factor may “depend[] on which tribunal was likely to address the challenged patent first,” which is the PTAB (*supra* § X.B.2). *Google v. Parus Holdings*, IPR2020-00846, Paper 9 at 20-21 (PTAB Oct. 21, 2020). In this instance, the PTAB will address the challenged patent first. When the FWD issues, the Delaware Litigation will have had no trial but will still be in its summary judgment/Daubert phase. *Ex. 1031*, 3.

6. **Merits**

The “strong showing on the merits” presented here weighs against denial. *Seven Networks*, Paper 10 at 20.

XI. CONCLUSION

For the foregoing reasons, Petitioner requests institution of IPR and cancellation of all the Challenged Claims.

XII. PAYMENT OF FEES

Petitioner submits concurrently herewith the required fees under 37 C.F.R. §§ 42.15(a) and 42.103(a). The Office is authorized to charge any shortfall or other fees due during this proceeding to Deposit Account No. 50-2778.

Dated: December 4, 2024

Michael A. Fisher

Jeffrey B. Plies, reg. no. 46,999

Michael A. Fisher, reg. no. 42,536

DECHERT LLP

Counsel for Petitioner

WORD COUNT CERTIFICATION

Pursuant to 37 C.F.R. § 42.24(d), I certify that this Petition contains 13,894 words (excluding the title page, table of contents, table of authorities, table of exhibits, mandatory notices, this certificate, the claim listing, and the certificate of service), as determined by Microsoft Word.

Dated: December 4, 2024

Michael A. Fisher

Michael A. Fisher, Reg. No. 42,536

DECHERT LLP

Counsel for Petitioner

CHALLENGED CLAIM LISTING
(INCLUDING LIMITATIONS OF CANCELED BASE CLAIMS 7, 12, 15)

Claim 1
1[Pre]: A system for recording locally generated audio comprising:
1[A]: at least one master timecode generator for generating a plurality of master timecodes; and
1[B]: at least one local audio device wearable by a creator of said locally generated audio including:
1[C]: at least one local audio device receiver for receiving at least one of the group consisting of digital commands, said master timecodes, and non-local audio data;
1[D]: at least one audio input port for receiving locally generated audio from an audio input device;
1[E]: at least one memory; and
1[F]: at least one control unit electrically coupled to said local audio device receiver, said audio input device, and said memory for creating local audio data from said locally generated audio and storing said local audio data in said memory;
1[G]: wherein said local audio data includes stamped local audio data and unstamped local audio data;
1[H]: wherein said stamped local audio data includes at least one first timestamp to reference at least a portion of said local audio data to at least one of said master timecodes; and
1[I]: wherein said unstamped local audio data does not include a reference to said master timecodes.

Claim 2

A system according to claim 1, wherein said local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.

Claim 3

3[A] & 3 [B]: A system according to claim 1, said system further comprising: at least one remote control unit having an RCU transmitter capable of wirelessly transmitting digital commands; wherein said remote control unit controls at least one function of said local audio devices via transmission of at least one of said digital commands; and

3[C]: wherein said function includes at least one of the group consisting of ... [adding/deleting/altering] said local audio device identifier ... [adding/deleting/altering] said performer identifier ... and combinations thereof.

Claim 4

4[A]: A system according to claim 1, said system further comprising: a multi-memory unit including:

4[B]: at least one memory unit interface for connection to at least a portion of said memory; and

4[C]: a user interface for manipulating said local audio data contained in said at least a portion of said memory;

4[D]: wherein said manipulation includes at least one of the group consisting of [adding/deleting/altering] said track identifier ... [adding/deleting/altering] said local audio device identifier ... [adding/deleting/altering] said performer identifier ... and combinations thereof.

Claim 5

A system according to claim 4, wherein said manipulation is performed via commercially available software.

Claim 6

A system according to claim 1, wherein said master timecode includes at least one of the group consisting of time data, frame data, timecode type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.

Claim 7

7[Pre]: A system for recording locally generated audio comprising:

7[A]: at least one master timecode generator for generating a plurality of master timecodes; and

7[B]: at least one local audio device wearable by a creator of said locally generated audio including:

7[C]: at least one local audio device receiver for receiving at least one of the group consisting of digital commands and said master timecodes;

7[D]: at least one audio input port for receiving locally generated audio from an audio input device;

7[E]: at least one memory;

7[F]: at least one local timecode generator for generating a plurality of local timecodes; and

7[G]: at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory;

7[H]: wherein said stamped local audio data includes at least one local timestamp to reference at least a portion of said stamped local audio data to at least one of said local timecodes; and

7[I]: wherein said stamped local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.

Claim 9

Claim 9[Pre]: A system according to claim 7, said system further comprising:

Claim 9[A]: a multi-memory unit including:

Claim 9[B]: at least one memory unit interface for connection to at least a portion of said memory; and

Claim 9[C]: a user interface for manipulating said local audio data contained in said at least a portion of said memory;

Claim 9[D]: wherein said manipulation includes at least one of the group consisting of [adding/deleting/altering] said track identifier...[adding/deleting/altering] said local audio device identifier...[adding/deleting/altering] said performer identifier...and combinations thereof.

Claim 10

A system according to claim 9, wherein said manipulation is performed via commercially available software.

Claim 12

12[A]: locally receiving said local audio generated by at least one performer during an audio event;

12[B]: wirelessly transmitting said local audio to at least one of the group consisting of a recorder, a receiver, and combinations thereof;

12[C]: locally recording said local audio as local audio data in at least one memory of at least one local audio device; and

12[D]: remotely recording said transmitted local audio via at least one of the group consisting of a recorder, a receiver, and combinations thereof as remote audio data;

12[E]: wherein at least a portion of said local audio data is retrieved during or subsequent to said audio event and is combined with said remote audio data;

12[F]: wherein said local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.

Claim 13

13[Pre]: A method according to claim 12, said method further comprising the step of:

13[A]: locally receiving or generating a plurality of master timecodes;

13[B]: wherein said local audio data includes stamped local audio data and unstamped local audio data;

13[C]: wherein said stamped local audio data includes at least one first timestamp to reference at least a portion of said local audio data to at least one of said master timecodes;

13[D]: wherein said unstamped local audio data does not include a reference to said master timecodes;

13[E]: wherein said master timecode includes at least one of the group consisting of time data, frame data, timecode type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.

Claim 15

15[Pre]: A method according to claim 12, further comprising:

15[A]: manipulating said local audio data contained in at least a portion of said memory;

15[B]: wherein said manipulation includes at least one of the group consisting of [adding/deleting/altering] said track identifier... [adding/deleting/altering] said local audio device identifier...[adding/deleting/altering] said performer identifier...and combinations thereof.

Claim 16

A method according to claim 15, wherein said manipulation is performed via commercially available software.

Claim 17

17[Pre]: A method of recording local audio, said method comprising the steps of:

17[A]: locally receiving said local audio generated by at least two performers during an audio event;

17[B]: locally recording said local audio as local audio data in at least one memory of at least one local audio device; and

17[C]: locally receiving or generating a plurality of master timecodes;

17[D]: wherein said local audio data for each of said performers is retrieved from said local audio devices subsequent to said audio event and is combined to create a single multi-track audio file;

17[E]: wherein said local audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof;

17[F]: wherein said local audio data includes stamped local audio data and unstamped local audio data;

17[G]: wherein said stamped local audio data includes at least one first timestamp to reference at least a portion of said local audio data to at least one of said master timecodes;

17[H]: wherein said unstamped local audio data does not include a reference to said master timecodes; and

17[I]: wherein said master timecode includes at least one of the group consisting of time data, frame data, timecode type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.

Claim 18

18[A]: A method according to claim 17, further comprising: remotely controlling at least one function of at least one of said local audio device via at least one remote control unit;

18[B]: wherein said function includes at least one of the group consisting of [adding/deleting/altering] said track identifier ... [adding/deleting/altering] said

local audio device identifier ... [adding/deleting/altering] said performer identifier ... and combinations thereof.

Claim 19

19[A]: A method according to claim 17, further comprising: manipulating said local audio data contained in at least a portion of said memory;

19[B]: wherein said manipulation includes at least one of the group consisting of [adding/deleting/altering] said track identifier ... [adding/deleting/altering] said local audio device identifier ... [adding/deleting/altering] said performer identifier ... and combinations thereof.

Claim 20

A method according to claim 19, wherein said manipulation is performed via commercially available software.

CERTIFICATE OF SERVICE

I certify that today in:

RØDE Microphones, LLC., et al. v. Zaxcom, Inc., IPR2025-00231 (U.S. Patent 7,929,902)

I caused to be served a copy of:

Petition
Power of Attorney
Exhibits 1001-1006, 1008, 1010, 1014-1021, 1023-1028, 1031-1035

upon:

ZAXCOM INC., c/o:

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via:

Electronic Mail

Patent Owner agreed to have the above-listed counsel accept electronic service of the Petition on April 30, 2024. *See* 37 CFR § 42.105(b) (“Upon agreement of the parties, service may be made electronically....”).

Dated: December 4, 2024

By: /Michael A. Fisher/
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Exhibit F

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RØDE MICROPHONES, LLC AND
FREEDMAN ELECTRONICS PTY LTD,
Petitioners

v.

ZAXCOM, INC.,
Patent Owner.

IPR2025-00232

Patent 10,276,207

PETITION FOR INTER PARTES REVIEW

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TABLE OF EXHIBITS

Exhibit No.	Description
1001	United States Patent No. 10,276,207
1002	Declaration of Professor Chris Kyriakakis
1003	United States Patent No. 6,825,875 (“Strub”)
1004	United States Patent No. 5,479,351 (“Woo”)
1005	United States Publication No. 2002/0159179 (“Nagai”)
1006	United States Patent Publication No. 2004/0028241 (“Gleissner”)
1007	[Reserved]
1008	United States Patent No. 7,483,485 (“Winningstad”)
1009	[Reserved]
1010	[Reserved]
1011	April 12, 2024 Email Serving Complaint to Freedman Electronics Pty Ltd.
1012	Zaxcom, Inc’s Initial Infringement Contentions Cover Document August 30, 2024
1013	Zaxcom, Inc’s Initial Infringement Contentions, ’207 Patent claim chart, August 30, 2024
1014	IPR2018-00972 Paper 41 November 7, 2019 Final Written Decision
1015	United States Patent 9,336,307

Exhibit No.	Description
1016	IPR2018-00972 Petition for Inter Partes Review
1017	IPR2018-01129 Paper 33 January 24, 2020 Final Written Decision
1018	IPR2018-01130 Paper 32 January 24, 2020 Final Written Decision
1019	IPR2018-00972 Zaxcom, Inc's Patent Owner Response
1020	IPR2018-01129 Zaxcom, Inc's Patent Owner Response
1021	IPR2018-01130 Zaxcom, Inc's Patent Owner Response
1022	March 11, 2019 IDS Form from United States Patent No. 10,276,207 File History
1023	United States Patent No 489,570
1024	Apple Be Damned: The Humble Headphone Jack Has Survived For More Than A Century by Jonathan Ore. Published September 10, 2016.
1025	IEC 61076-2-103:2004
1026	Wayback Machine Archived Copy of Sanken Catalogue
1027	Wayback Machine archived copy of Sanken Webpage
1028	United States Patent 8,385,814
1029	United States Patent No. 10,276,207 Prosecution History Excerpts
1030	United States Patent No. 7,929,902
1031	November 13, 2024 Doc. 98 Order Revising Schedule in <i>Zaxcom, Inc. v. Rode Microphones, LLC and Freedman Electronics PTY Ltd.</i>
1032	October 28, 2024 Letter from Zaxcom counsel responding to RØDE's request to reduce number of asserted claims

MANDATORY NOTICES UNDER 37 C.F.R. §42.8

Pursuant to 37 C.F.R. §42.8, Petitioner states as follows:

A. Real Parties-in-Interest (37 C.F.R. §42.8(b)(1))

The real parties-in-interest are RØDE Microphones, LLC and Freedman Electronics Pty Ltd.

B. Related Matters (37 C.F.R. §42.8(b)(2))**1. U.S. District Court for the District of Delaware**

The following pending district court litigation may affect or be affected by this proceeding: *Zaxcom, Inc. v. RODE Microphones, LLC, et al.*, No. 1:23-cv-01245-JFM (D. Del.), filed October 31, 2023 (“the Delaware Litigation”). Petitioner RØDE Microphones, LLC was served with the original Complaint on December 4, 2023. Petitioner Freedman Electronics Pty Ltd was served with the original Complaint on April 12, 2024. (Exhibit 1011). On November 14, 2024, Zaxcom filed an Amended Complaint which alleges, among other things, that Petitioner has infringed certain claims of U.S. Patent No. 10,276,207 (“the ’207 Patent”) and six other patents: U.S. Patent Nos. 7,711,443 (“the ’443 Patent”), 7,929,902 (“the ’902 Patent”), 8,385,814 (“the ’814 Patent”), 9,336,307 (“the ’307 Patent”), 11,610,605 (“the ’605 Patent”), and 12,051,444 (“the ’444 Patent”) (collectively, the “Delaware Patents-in-Suit”). The Delaware patents-in-suit are all related to each other through a chain of continuation and continuation-in-part applications.

2. Patent Trial and Appeal Board—Co-Pending Matters

Concurrently with the present Petition, Petitioner is filing *Inter Partes* Review (“IPR”) Petitions challenging the patentability of certain claims of the ’443 and ’902 Patents. Those IPRs may affect indirectly or may be affected indirectly by the decision in this proceeding since all three patents are related and are involved in the Delaware Litigation.

3. Patent Trial and Appeal Board—Past Matters

The related ’902, ’814, and ’307 Patents were previously involved in the following IPRs filed by third party Lectrosonics:

- ’902 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129 (“the ’1129 IPR”);
- ’814 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01130 (“the ’1130 IPR”); and
- ’307 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-00972 (“the ’972 IPR”)

(collectively, “the Lectrosonics IPRs”).

Since the presently challenged claims of the ’207 Patent share many elements with claims of the related ’902, ’814, and ’307 Patents that the PTAB previously found unpatentable in the Lectrosonics IPRs, and since the Lectrosonics IPRs were

based on several of the same prior-art references relied on here, the Lectrosonics IPRs may affect the decision in this proceeding.

C. Lead and Backup Counsel and Service Information (37 C.F.R. §§42.8(b)(3) and (b)(4))

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I. INTRODUCTION

RØDE Microphones, LLC and Freedman Electronics Pty Ltd (collectively “RØDE” or “Petitioner”) requests IPR and cancellation of Claims 17-19, 21-23, 33, 34, 59, 60, and 66 (“the Challenged Claims”) of the ’207 Patent”) (Ex. 1001). IPR of the Challenged Claims should be instituted and the claims found unpatentable.

II. CERTIFICATION OF GROUNDS FOR STANDING UNDER 37 C.F.R. § 42.104(a)

Petitioner certifies that the ’207 Patent is available for IPR and Petitioner is not barred or estopped from requesting IPR of the Challenged Claims.

III. IDENTIFICATION OF RELIEF REQUESTED AND GROUNDS FOR CHALLENGE UNDER 37 C.F.R. §§ 42.22(a)(1) AND 42.104(b)

Petitioner requests review and cancellation of Claims 17-19, 21-23, 33, 34, 59, 60, and 66 of the ’207 Patent on the following ground:

Ground	Claims	Basis	Prior Art
1	17-19, 21-23, 33, 34, 59, 60, 66	35 U.S.C. § 103	U.S. Patent No. 6,825,875 (“Strub”) (Ex. 1003), U.S. Patent No. 5,479,351 (“Woo”) (Ex. 1004), U.S. Patent Pub. No. 2002/0159179 (“Nagai”) (Ex. 1005), U.S. Patent Pub. No. 2004/0028241 (“Gleissner”) (Ex. 1006)

For purposes of the district court litigation, Petitioner reserves the right to argue that one or more of the terms in the claims of the '207 Patent are indefinite or require construction. Furthermore, Petitioner's reading of the respective claim terms is based on Zaxcom's reading of those terms in the Delaware Litigation, including Zaxcom's application of the claim terms in its infringement contentions in that litigation.

IV. BACKGROUND OF THE TECHNOLOGY

The '207 Patent describes a system for recording audio in a wearable local device and wirelessly transmitting the same audio to a remote device. Ex. 1001, 1:45-2:10. The alleged invention of the '207 Patent is that the local device stores (*i.e.*, records) local audio data, receives a master timecode from a master timecode generator, uses the master timecode to jam synchronize a local timecode generator, and stamps the stored (*i.e.*, recorded) audio data with the local timecode. *Id.* 3:16-19, 4:1-12, 4:52-5:10, 10:44-11:4, 12:38-42, 14:52-67, 15:32-36, 16:44-47, 17:9-16, 45:1-12, 47:63-48:6, Figs. 4A, 4B, 5, 6. In its initial infringement contentions in the Delaware Litigation, Zaxcom has interpreted the term “jam synchroniz[ing]” to encompass either synchronizing one device to the clock of another device, or receiving a timecode and synchronizing a device to that timecode. *See* Ex. 1012 , at 5; Ex. 1013at 12-15.

This purported innovation was not new, but existed in the prior art. For example, without limitation, Strub and Woo both teach local devices which receive a master timecode from a master timecode generator, use the master timecode to jam synchronize a local timecode generator, and stamp recorded audio data with the local timecode. *See, e.g.*, Ex. 1003, 13:52-54 (“clock...used to time-stamp the recording data obtained by the recording unit.”), 62:26-63:50, 75:25-57 (“SMPTE time code input ... to enable synchronization”); Ex. 1004, Abstract (synchronization using timecodes”), 1:60-2:9, 2:39-48, 3:3-24, 4:3-32, 5:5-67 (master timecodes used to “date and time tag[]” recordings), 7:26-50 (master clock), 8:60-9:4, 9:56-62, 10:15-64, Figs. 1, 3-6; Ex. 1002, ¶ 39.

V. PERSON OF ORDINARY SKILL IN THE ART

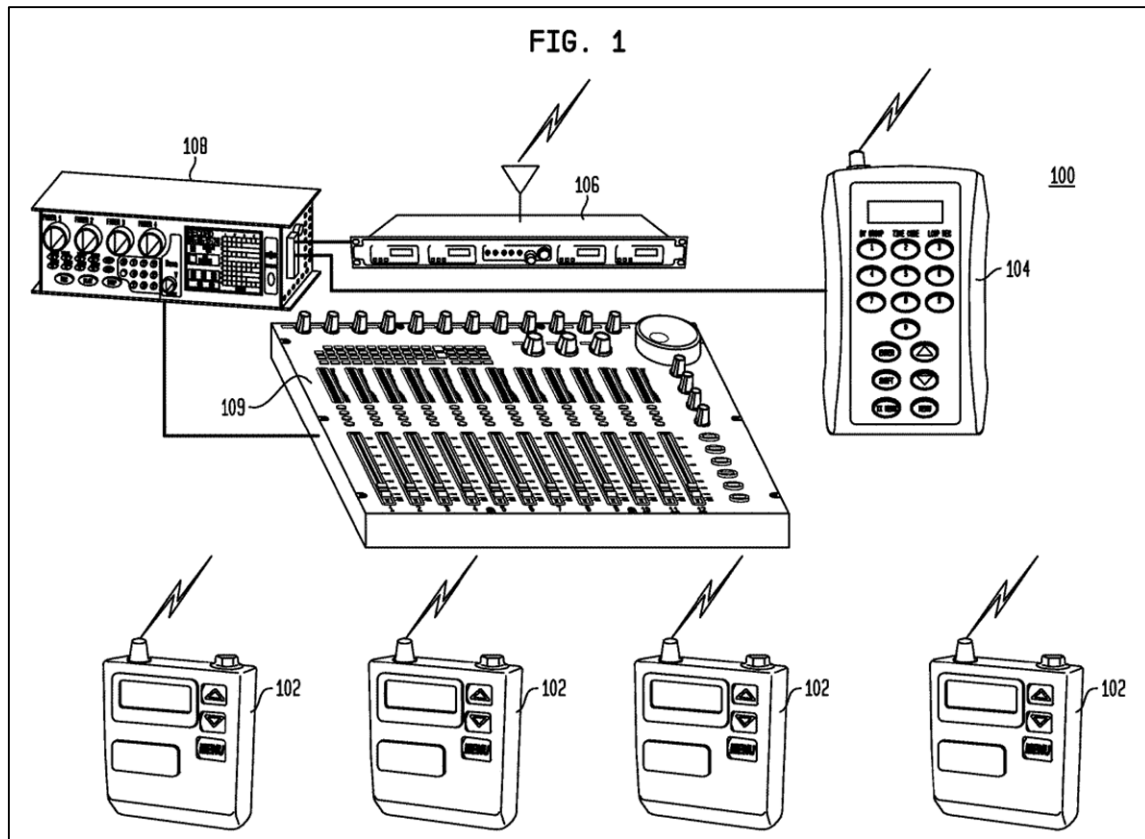
A person of ordinary skill in the art (“POSA”) as of the claimed priority date would have had at least a Bachelor’s degree in electrical engineering or a related or equivalent field, and two or more years of experience working with audio systems. However, additional years of education in the above-referenced fields may compensate for fewer years of experience. Ex. 1002, ¶ 40.

VI. THE ’207 PATENT

A. Summary of the Specification

The ’207 Patent describes a recording system 100 which wirelessly records audio performances by one or more performers. Ex. 1001, 4:1-3, Fig. 1. The system 100 includes one or more wearable local audio devices 102, a remote receiver 106,

a remote recorder 108 connected to the receiver 106, and a remote control unit (“RCU”) capable of transmitting a time reference signal, digital commands, and/or audio to the other components, as depicted in Figs. 1:

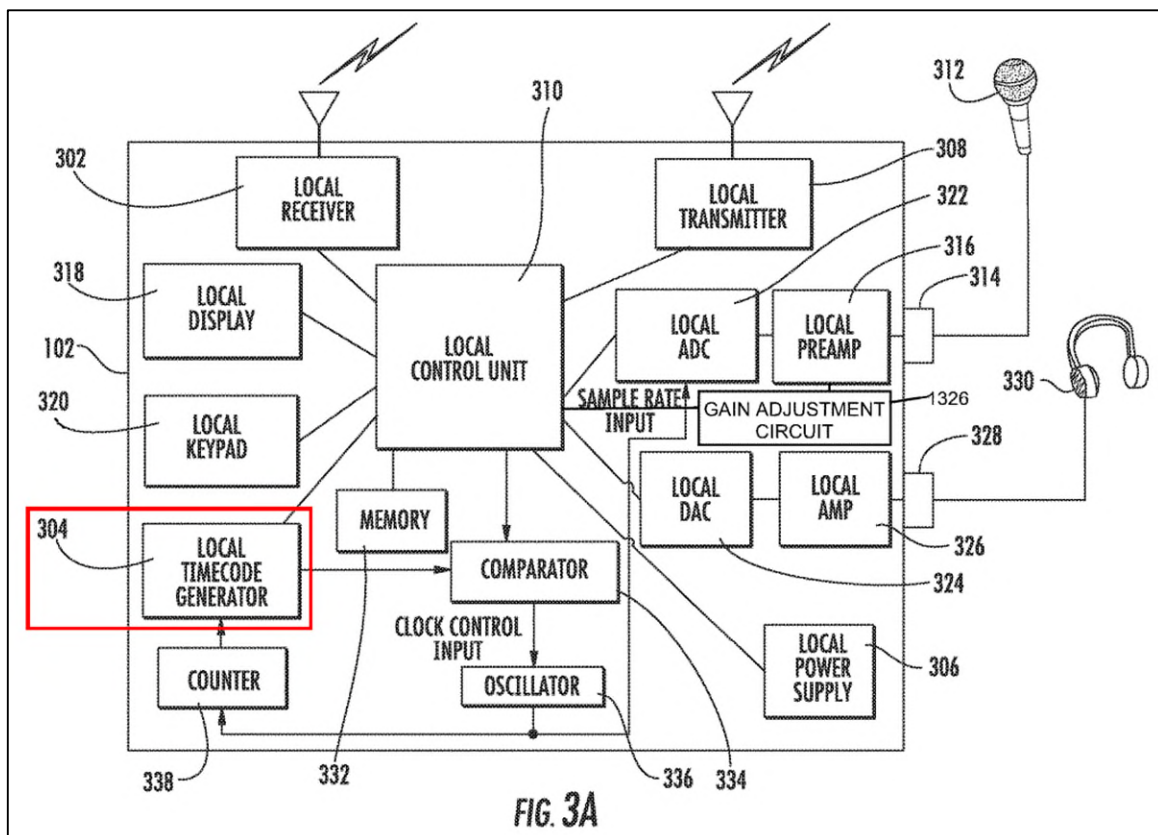


See id. 4:27-33, 43:24-26, 36:41, 38:25, 44:56-60, 47:52-57, Fig. 3B. The local audio devices 102 record audio from the respective performers and transmit both live and replayed audio wirelessly to the remote receiver 106. *Id.* 4:40-46. The audio received by the receiver 106 is recorded by the recorder 108. *Id.* 4:46-49.

To support synchronization of the audio received by the receiver 106, the components of the system 100 are synchronized to allow each component to timestamp its recorded audio. *Id.* 4:3-12. The timestamps allow the system to

combine individual audio tracks into multi-track audio files, correct for lost audio data, and/or synchronize tracks in post-processing. *Id.* 4:12-26; 4:52-5:10.

To synchronize its devices, the system can include a master timecode generator, which can be, *e.g.*, integral to the RCU 104 or the recorder 108. *Id.* 11:29-35. The master timecode generator generates master timecodes and sends them wirelessly to the local audio devices 102. *Id.* 17:9-11, Fig. 6 (step 604). Each local audio device 102 can also have its own local timecode generator 304, as illustrated in Fig. 3A:



See *id.* 6:2-6.

The local audio devices 102 can use the master timecodes to jam synchronize their local timecode generators 304 and/or timestamp the locally recorded audio. *Id.* 3:16-19, 4:3-12, 4:52-5:10, 6:2-8 (“This master time reference signal provides a time reference for all local audio devices 102, which may use this information for...jam synchronizing their respective local timecode generators 304..., adjusting the speed of the local timecode generators 304..., timestamping locally recorded audio, etc.”), 10:56-11:4, 14:52-60, 15:32-36, 16:44-47, 17:9-22, Figs. 3A, 4A, 4B, 5, 6; *see also* Ex. 1002, ¶ 50.

B. Claims

The '207 Patent has 106 claims, of which Claims 17-19, 21-23, 33, 34, 59, 60, 66 are challenged in this Petition. Claims 17 and 59 are independent. Each Challenged Claim refers to a wearable audio device which receives locally generated audio, wirelessly transmits the audio to a remote device, stores the audio in a memory, and stamps the audio with a timecode generated by a local timecode generator, wherein the local timecode generator is synchronized to a master timecode generator. *See* Ex. 1001, Claims 17, 59. The '207 acknowledges that all of those features were known in the prior art, since they are described in the patent's Background section. *Id.* 1:45-50 (invention relates to “**recording** and processing audio received from one or more **wireless devices**”), 1:59-65 (“[T]he received audio and/or the multitrack audio is **timestamped with a time reference signal such as a**

Society of Motion Picture and Television Engineers ('SMPTE') timecode signal....”), 2:1-10 (“[The] **wireless transmitters** may take the form of **body packs that are worn by each performer**. Typically, the audio receiver receives each performer's audio from the performer's respective body pack via an analog or digital wireless transmission and transmits it to the audio recorder.”).

A majority of the challenged dependent claims add features that are part of the admitted prior art in the Background section of the '207 Patent:¹

Claim(s)	Feature	Location in '207 Background
23, 60	timecode is “SMPTE compliant timecode”	1:61-63
18	control unit stores locally generated audio in the memory and transmits the locally	1:47-51 (recording and processing audio using wireless devices operating in “synchronous mode.”). A POSA would

¹ See *Nichia Corp. v. Emcore Corp.*, Case IPR2012-00005, Paper 68 at 20 (P.T.A.B. Feb. 11, 2014) (“The Admitted Prior Art includes the background section of the '221 provisional application...and the background section of the '215 patent....”); *In re Metz*, 173 F.3d 433, at *1 (Fed. Cir. 1998) (“The admitted prior art apparatus is set forth...in the ‘Background of the Invention’ section of the patent.”); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1303 (Fed. Cir. 2016) (admitted prior art in background section); *In re Battiston*, 139 Fed.Appx. 281, 282 (Fed. Cir. 2005) (referring to “the Admitted Prior Art...in the ‘Background of the Invention’ section of [patent] application”).

	generated audio to a remote device substantially simultaneously	understand that the reference to “synchronous mode” means simultaneous transmission. Ex. 1002, ¶ 57.
19	receiver or recorder is not worn by a creator of locally generated audio and is located remotely from the local audio device.	2:1-27. A POSA would understand the Background section’s discussion of wireless transmission of the audio from the local device to the receiver/recorder, taken in context, to mean that the receiver/recorder is remote. Ex. 1002, ¶ 57.
22	timecodes include time data, frame data, type, recorder transport status, name of scene, name of take, or track identifier	1:59-64 (“[T]he received audio and/or the multitrack audio is timestamped with a [SMPTE] timecode signal containing information regarding the hour, minute, second,...”)
34	A local timecode is stored with the audio data.	1:59-65 (audio data “timestamped” with SMPTE timecode)

C. **[Reserved]**

D. **Lectrosonics IPRs**

1. **Collateral Estoppel Based on PTAB’s Findings Regarding Claim Elements in Prior Art and Obviousness of Combinations**

In the Lectrosonics IPRs, the PTAB made numerous findings regarding the presence of claim elements in Strub, Woo, Nagai, and Gleissner, and regarding the obviousness of combining those references. Zaxcom is collaterally estopped from disputing those findings.

Collateral estoppel, also known as issue preclusion, precludes a party from relitigating an issue if: “(1) the issue is identical to one decided in the first action;

(2) the issue was actually litigated in the first action; (3) resolution of the issue was essential to a final judgment in the first action; and (4) [the party against whom collateral estoppel is being asserted] had a full and fair opportunity to litigate the issue in the first action.” *Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1381 (Fed. Cir. 2022) (citation omitted). “It is well established that collateral estoppel applies to IPR proceedings.” *Id.* (citing *Papst Licensing GMBH & Co. KG v. Samsung Elecs., Am.*, 924 F.3d 1243, 1251 (Fed. Cir. 2019). Furthermore, “[i]t is well established that patent claims need not be identical for collateral estoppel to apply....Rather, collateral estoppel requires that the *issues of patentability* be identical....Thus, collateral estoppel may apply even if the patent claims ‘use slightly different language to describe substantially the same invention,’ so long as ‘the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity.’” *Google v. Hammond*, 54 F.4th at 1381 (emphasis in original); *see also Google LLC v. Parus Holdings, Inc.*, IPR2022-00279, Paper 16 at 17-21 (P.T.A.B. Sept. 18, 2023) (finding collateral estoppel where claim limitations were not identical, but were sufficiently similar that the *issues* were identical); *Papst*, 924 F.3d at 1250-53 (Fed. Cir. 2019) (applying issue preclusion to claim construction and application of a claim limitation to a prior-art reference based on prior PTAB decision); *see also United States v. Utah Constr.*

& Mining Co., 384 U.S. 394, 421-22 (1966) (collateral estoppel can arise from an administrative decision).

In the '972 IPR, the PTAB found Claims 12-14 of the '307 Patent anticipated by Strub. Ex. 1014 at 25-26. In doing so, the Board necessarily found all elements of those claims present in Strub, including the following:

- locally receiving local audio generated by at least one performer during an audio event;
- locally recording the local audio as local audio data in at least one memory of at least one local audio device wearable by a creator of said local audio;
- locally receiving or generating master time data including at least one of the group consisting of hour data, minute data, second data, and combinations thereof;
- at least one of a group consisting of...adding a local audio device identifier to at least a portion of said memory,...and adding said performer identifier to at least a portion of said local audio data;
- wirelessly transmitting the locally generated audio to a remote recorder; and
- remotely recording the locally generated audio by the remote recorder as remotely recorded audio data.

See Ex. 1015 Claims 12-14; Ex. 1016 at 48 (relying on Strub for “local audio device identifier” and “performer identifier” limitations); *see also* Ex. 1014 21-22 (finding that Strub discloses “a local audio device that records local audio and transmits the local audio to other remote devices” and “that the same local audio is stored at both the wearable local audio device as local audio data and the remote receiver/recorder as remotely recorded audio data”), 22 (“We...agree with Petitioner that Strub’s device is ‘wearable.’”);

Further in the ’972 IPR, the PTAB found Claim 1 of the ’307 Patent obvious over Strub combined with Nagai or Gleissner. Ex. 1014 19, 25. In making that determination, the PTAB necessarily found that Strub, Nagai and/or Gleissner teach “at least one audio input port for receiving said locally generated audio from an audio input device,” and that it would have been obvious to combine Strub with Nagai or Gleissner. *Id.* 16-19.

In the ’1129 and ’1130 IPRs, the Board made similar findings regarding (1) the presence of the above-referenced limitations in Strub, Nagai, and Gleissner, and (2) the obviousness of combining those three references. *See, e.g.*, Ex. 1017, 25 (finding Strub’s device wearable), 35 (finding ’902 Claims 7, 8, and 11 obvious over Strub in combination with Nagai or Gleissner, and Woo), 40 (finding that Strub teaches a local audio device that records local audio and transmits the same local audio to a remote device), 41 (finding ’902 Claims 12, 14, and 15 anticipated by

Strub); Ex. 1018, 22 (finding Strub’s device wearable), 32 (finding numerous ’902 Claims obvious over Strub in combination with Nagai or Gleissner, and Woo). The Board also found that Strub discloses “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory,” that Woo discloses a “master timecode generator for generating a plurality of master timecodes” and “jam synchroniz[ing]” a local clock with a master time clock “just as disclosed by the [related ’902 and ’814] patent[s],” and that a POSA would have been motivated to use Woo’s synchronization techniques in Strub’s system. Ex. 1017, 25-31; Ex. 1018, 22-28.

Zaxcom appealed the Board’s decisions in all three of the Lectrosonics IPRs. In each case, the Federal Circuit affirmed the decision in its entirety. *Zaxcom, Inc. v. Lectrosonics, Inc.*, Nos. 2020-1350, 2020-1405, 2022 WL 499843, at *1-2 (Fed. Cir. Feb. 18, 2022); *Zaxcom, Inc. v. Lectrosonics, Inc.*, Nos. 2020-1921, 2020-1922, 2020-1943, 2020-1944, 2022 WL 499848, at *1-2 (Fed. Cir. Feb. 18, 2022).

Zaxcom is estopped from disputing (1) the presence in the cited references of any of the above-listed limitations—or any materially identical limitations, or (2) the obviousness of combining Strub, Woo, Nagai, and Gleissner, because: the issues are identical to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the

Lectrosonics IPRs; and Zaxcom had a full and fair opportunity to litigate the issue in the Lectrosonics IPRs. *See Google v. Hammond*, 54 F.4th at 1381.

2. **Collateral Estoppel Based on PTAB’s Findings Regarding Zaxcom’s Purported Objective Indicia of Nonobviousness**

In the Lectrosonics IPRs, Zaxcom propounded evidence purporting to show objective indicia of nonobviousness, including: testimony alleging a long-felt need for repairing dropouts; testimony alleging failure of others to implement dropout repair; alleged industry praise in the form of witness testimony, an Emmy award, and a Technical Achievement Award from the Academy of Motion Picture Arts and Sciences; and expert testimony attempting to connect the objective-indicia evidence to the challenged claims. *See* Ex. 1019, 52-59; Ex. 1020, 54-66; 1021, 34-59. But the PTAB found that all of Zaxcom’s purported objective indicia related to replacing remotely recorded audio data with local audio data—a/k/a “dropout repair”—and had no nexus with claims lacking that feature. *See* Ex. 1016, 23-25; Ex. 1017, 31-35; Ex. 1018, 28-31. Here, none of the Challenged Claims include dropout repair or replacing remotely recorded audio data with local audio data. Thus, they also have no nexus with Zaxcom’s purported objective indicia of nonobviousness.

Zaxcom is estopped from relying on the same or substantially similar objective indicia of obviousness in the present case, because: the issues are identical to those decided in the Lectrosonics IPRs; the issues were actually litigated in the Lectrosonics IPRs; resolution of the issues was essential to the Lectrosonics IPRs;

and Zaxcom had a full and fair opportunity to litigate the issue in the Lectrosonics IPRs. *See Google v. Hammond*, 54 F.4th at 1381.

VII. CLAIM CONSTRUCTION

Petitioner does not currently seek construction of any terms.

VIII. OVERVIEW OF THE PRIOR ART

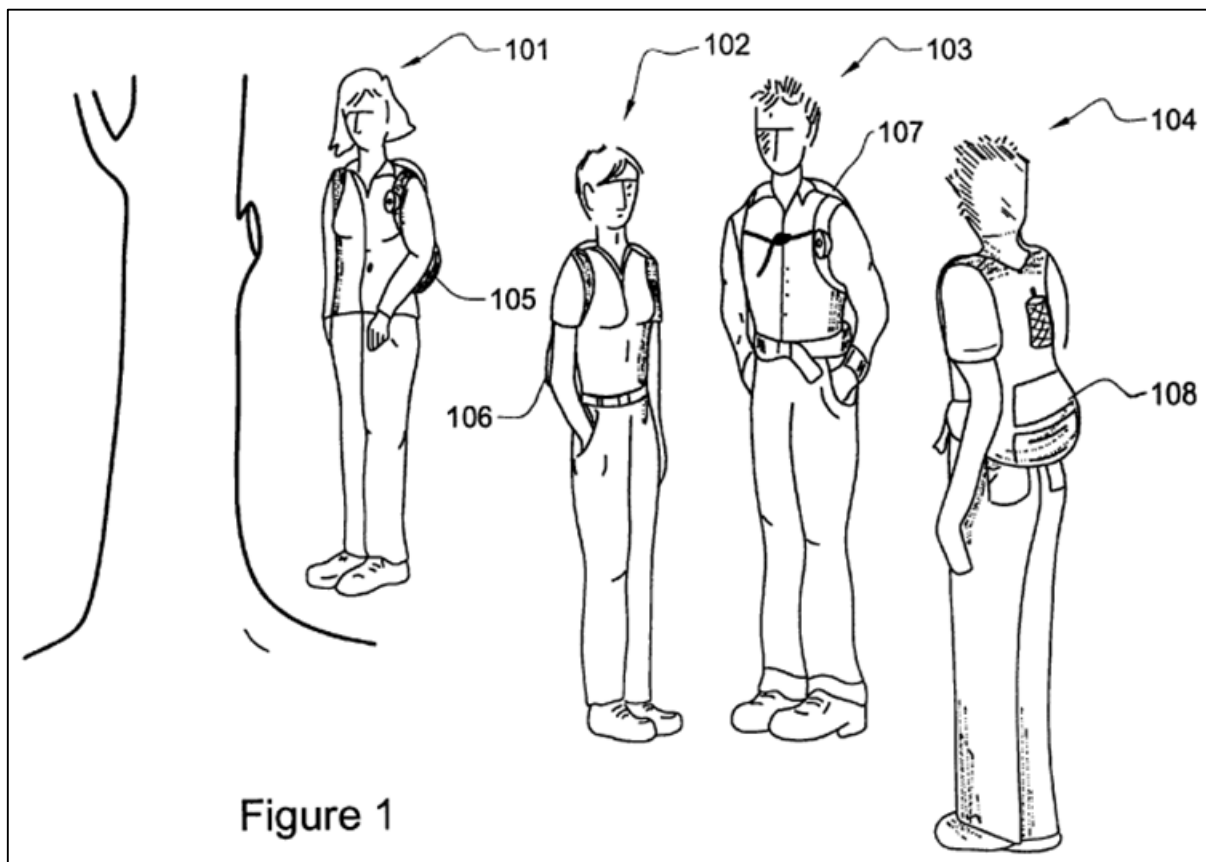
Petitioner asserts one ground for invalidity based on the following four prior art references:

A. Strub

Strub is prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (e). It discloses a system comprising a plurality of wearable, audio/video recording units, each storing locally generated audio and video and wirelessly transmitting that same audio and video to one or more of the other wearable devices. *See, e.g.*, Ex. 1003, 4:28-30 (“a small, lightweight, wearable recording unit”), 8:7-19, 8:50-53 (recording units “adapted to obtain audio data representing an aural record of the event....[S]uch visual and/or audio data is sometimes referred to as ‘recording data.’”), 12:13–21, 12:31–39 (“The transmitter 309 transmits signals (‘recording data signals’) representing recording data acquired by the recording unit 300, so that such recording data can be used by other recording units...”), 14:59-15:11 (wearable), 21:65-22:7 (audio data acquisition), 35:54–65, 37:11–40, Figs. 1, 4, 6, 8A-9B. Further, “each recording unit stores data representing the recording(s) obtained by another recording unit[.]....”). *Id.* 37:11–40. Thus, from the perspective

of a person wearing one of Strub's recording units, that unit is a local audio device and the recording units worn by other people are remote devices which receive audio data from the local device and create their own recordings of that audio data.

Examples of Strub's audio/video recording units 105, 106, 107, 108 are depicted in Fig. 1:



See also id. 8:7-14, 67:30-53, Figs. 4, 6, 8A-9B.

Each of Strub's audio/video recording units includes a system controller having an internal clock which generates local timecodes used to time-stamp the audio data. *See, e.g., id.* 13:50-58 (“[T]he system controller can include a clock that

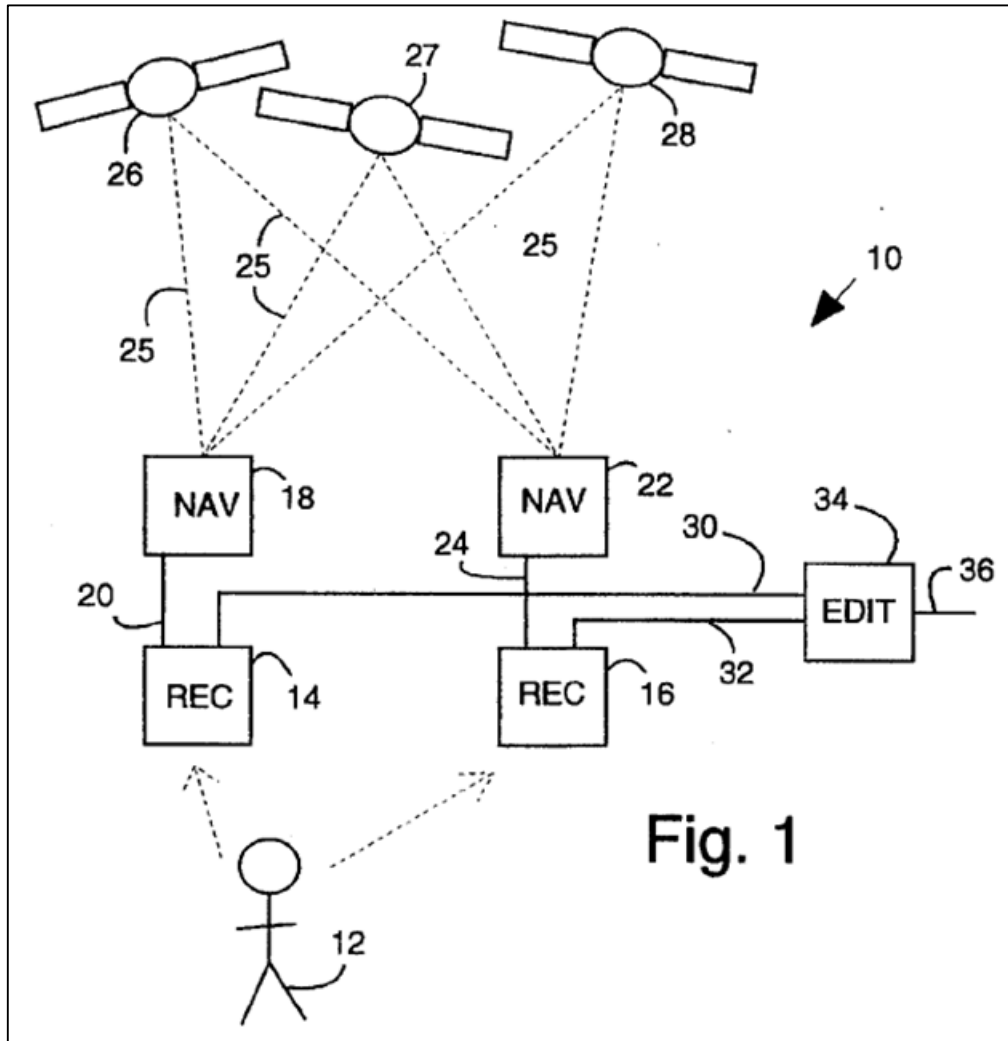
is used to time-stamp the recording data obtained by the recording unit.”), 63:50-60, 79:54-80:9; *see also* Ex. 1002, ¶ 78.

Strub is listed in the “References Cited” in the ’207 Patent and appears in an IDS initialed by the examiner, Ex. 1022 at 1, but does not appear in any office action. There is no indication that the examiner substantively considered Strub. However, Strub was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over Strub alone and over the combination of Strub with Woo, Nagai, and/or Gleissner. *Supra* § VI.D.

B. Woo

Woo is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a system in which one or more recorders 14 and 16 record locally generated audio and transmit the same locally generated audio to a remote device—editing station 34—which creates its own recording of the audio. *See* Ex. 1004, 5:3-5 (“The system 10 is used to record the live performance of a performer 12, e.g., a singer or actor. A recorder 14 captures the performance from its vantage point while another recorder 16 independently captures the same performance from its own vantage point.”), 5:37-49 (“The connections 30 and 32 represent the communication of the respective recordings by wire, radio link and/or tape or film delivery to the editing station 34, e.g., a telecine suite or an audio layback [*sic*:playback] suite.”), 8:32-44,

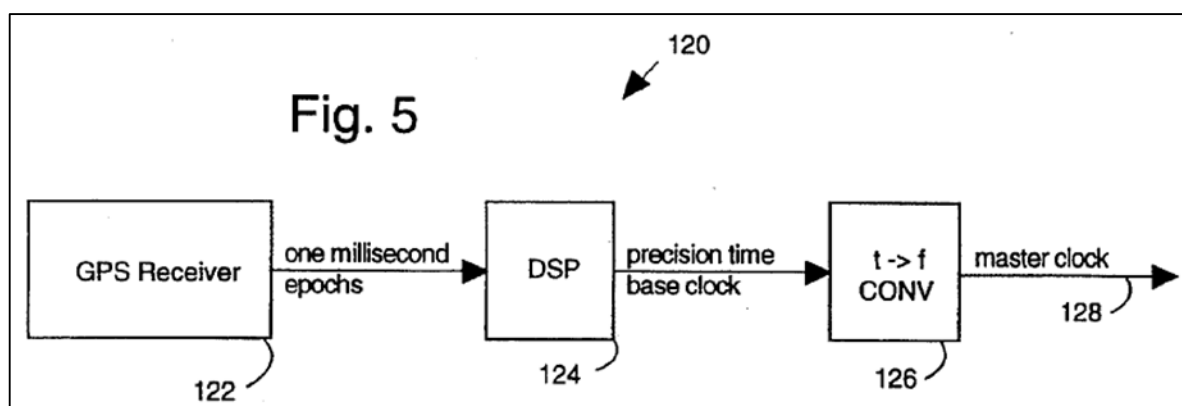
9:40-43, 9:56-62, Figs. 1, 4. Fig. 1 depicts Woo's system in block-diagram form, including recorders 14 and 16 and editing station 34:



Woo provides examples in which the local storage of the audio and the transmission of the audio to the remote editing station 34 are done substantially simultaneously. *Id.* 8:51-54 (“In step 114, the combining and generating may be done in real-time with the performance such that the third recording is delayed from the performance by an insubstantial amount of time.”), 10:7-10 (“the combining and

generating are done in real-time with said common event such that said third recording is delayed from said common event by an insubstantial amount of time.”).

Each of Woo’s local audio devices includes a local timecode generator which is jam-synchronized to a master timecode generator using GPS-based master timecodes. *Id.* Abstract (“A GPS receiver comprises a data output port for communicating time code information....Such time code information is input to independent sound, film and video recorders....”), 3:37-67 (describing soft and hard jam-syncing of a local timecode generator to a master timecode generator), 7:26-50, (using GPS-based time code generator as a master clock), 8:60-9:4 (“synchronizing film and video equipment”), Figs. 1, 3, 5, 6. Fig. 5 provides an exemplary depiction of how Woo’s system uses GPS signals to provide master timecodes—master clock output 128—for synchronizing the local timecode generator in each local audio device:



The local timecode generator generates SMPTE timecodes which are used to time-stamp—*e.g.*, date and time tag—the local audio data. *Id.* Abstract (“[SMPTE-

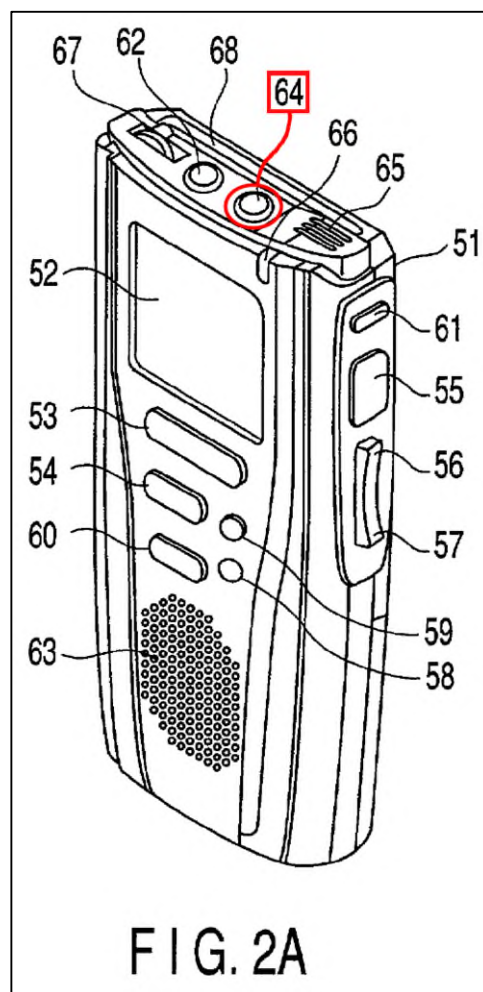
formatted] time code information is input to independent sound, film and video recorders...to create tracks on each recording for re-synchronizing the pictures and sounds in post-performance editing”), 1:60-2:9, 2:39-48, 3:3-24, 4:3-32 (“generating coordinated time codes at independent sites proximate to respective recorders.”), 4:62-64 (describing “a time-keeping system for synchronizing sound and picture recordings from a plurality of independent recording devices”), 5:37-45 (“The recorders 14 and 16 each transmit their respective recordings over a pair of connections 30 and 32 to an editing station 34. Each recording delivered to the editing station 34 has been date and time tagged, using date and time information received by the recorders 14 and 16 over connections 20 and 24.”); *see also* Ex. 1002, ¶ 84.

Woo is listed in the “References Cited” in the ’207 Patent and appears in an IDS initialed by the examiner, Ex. 1022 at 1, but does not appear in any office action. There is no indication that the examiner substantively considered Woo. However, Woo was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over the combination of Strub, Woo, Nagai, and/or Gleissner. *Supra* § VI.D.

C. Nagai

Nagai is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It describes a voice recording and reproducing apparatus with a memory card 117 for

storing voice data. Ex. 1005, Abstract, [0105]-[0106], [0115], Figs. 1, 4. Nagai's voice recorder has an audio input port—"mike [sic] jack" 2 or 64—configured to couple to an audio input device—*e.g.*, an external microphone—to receive locally generated voice signals. *Id.*, [0100], [0109]-[0110], [0139], Fig. 1, 2A. An example of Nagai's audio input port—"mike [sic] jack" 64—is illustrated in Fig. 2A (annotated below):



Nagai's voice recorder also has a gain adjustment circuit—volume-control wheel 67 and accompanying circuitry 25—which controls the "reproduction level"

of sound coming from the headphone or speaker, and also sets the "attenuation value" for recording:

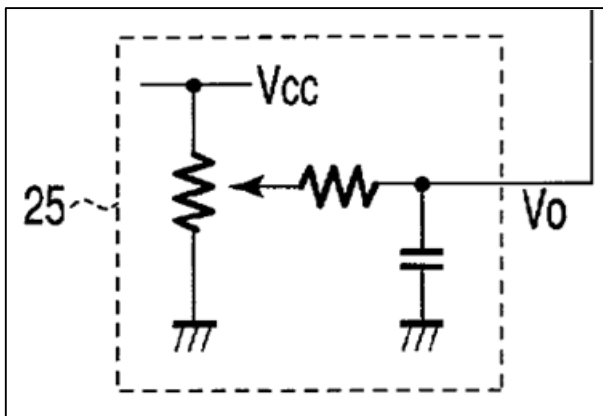


Fig. 1 (excerpted)

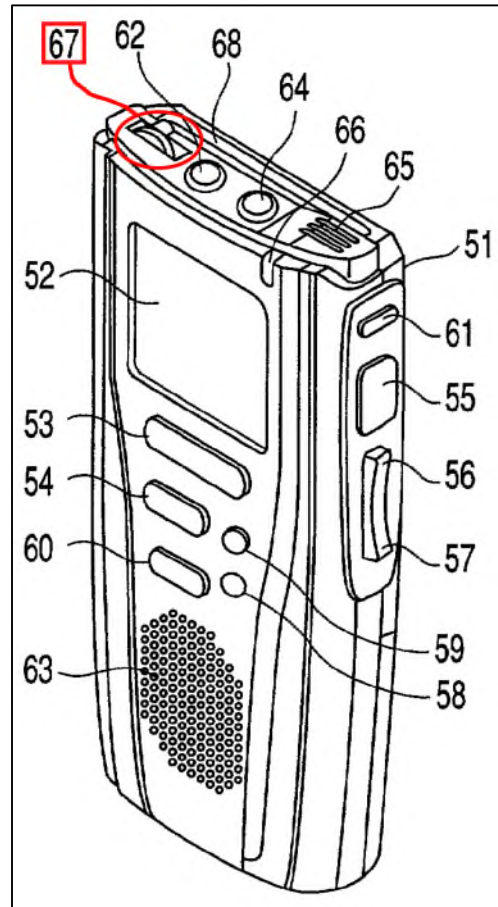


Fig. 2A (annotated)

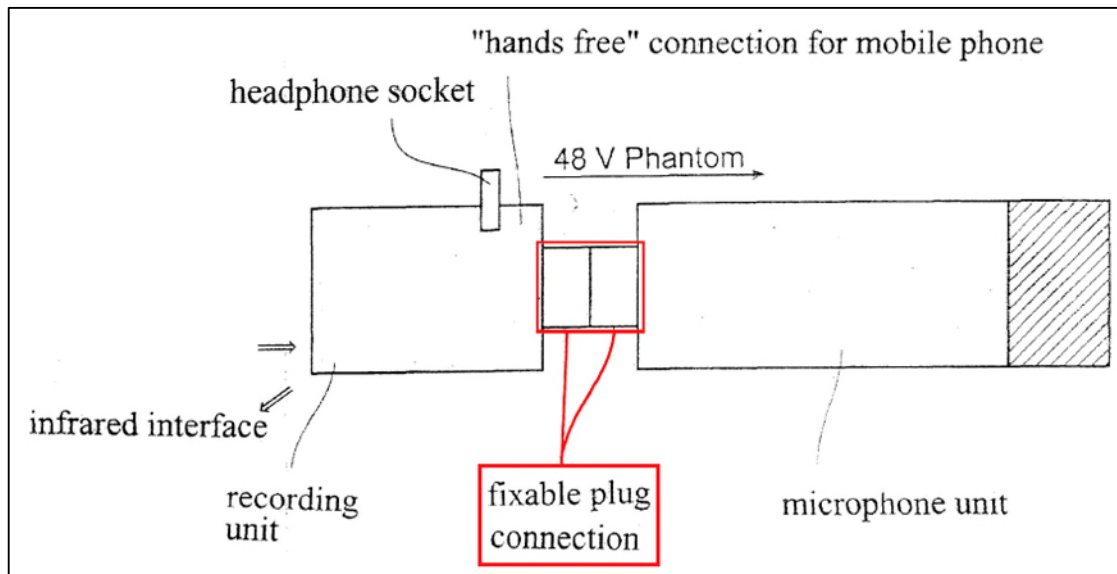
See also id. [0033]-[0036] ("reproduction level control means"), [0141]-[0143], [0261]-[0274] (using wheel 67 and control circuit 25 to set "attenuation value"), [0278]-[0279], [0285], [0321] (reproduction level "used in both the recorder and player modes"), Claims 11-15, Figs. 3, 21; Ex. 1002, ¶ 88.

Nagai is listed in the “References Cited” in the ’207 Patent and appears in an IDS initialed by the examiner, Ex. 1022 at 2, but does not appear in any office action. There is no indication that the examiner substantively considered Nagai.

However, Nagai was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over the combination of Strub with Nagai or Gleissner and over the combination of Strub with Woo and Nagai or Gleissner. *Supra* § VI.D.

D. Gleissner

Gleissner is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a portable audio data recorder which stores locally generated audio in a data memory. Ex. 1006, Abstract, [0025], [0031]. Gleissner’s audio data recorder has an audio input port—an XLR plug connector—configured to couple to an audio input device—a microphone—to receive locally generated audio. *Id.* [0013] (“A XLR plug connection is preferably formed between the recording unit and the microphone unit. This has the advantage that the recording unit can be coupled together with practically any desired microphones....”), [0024], [0032]. Gleissner’s audio input port—the XLR plug connector—is depicted in Fig. 1:



Id. Fig. 1 (annotated); *see also* Ex. 1002, ¶ 92.

Gleissner is listed in the “References Cited” in the ’207 Patent and appears in an IDS initialed by the examiner, Ex. 1022 at 2, but does not appear in any office action. There is no indication that the examiner substantively considered Gleissner.

However, Gleissner was before the PTAB in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over the combination of Strub with Nagai or Gleissner and over the combination of Strub with Woo and Nagai or Gleissner. *Supra* § VI.D.

IX. SPECIFIC GROUNDS FOR INVALIDITY

A. Ground 1: Claims 17-19, 21-23, 33, 34, 59, 60, and 66 are Rendered Obvious Under § 103 By the Combination of Strub, Woo, Nagai, and Gleissner

1. A POSA Would have Been Motivated to Combine Strub, Woo, Nagai, and Gleissner

In the Lectrosonics IPRs, the PTAB found that a POSA would have motivated to combine Strub, Woo, Nagai, and Gleissner, and that the combination(s) would have been obvious. *See supra* VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

Moreover, the teachings of Strub, Woo, Nagai, and Gleissner provide substantial motivation to combine them. For example, the systems described in Strub and Woo are the same type of apparatus used for the same purpose. Each discloses a system for receiving and recording local audio in a local device, wirelessly transmitting the same audio to a remote device, and recording the audio in the remote device. *See, e.g.*, Ex. 1003, 8:50-53, 12:13-21, 12:31-39, 21:65-22:7, 35:54-65, 37:11-40, Figs. 1, 4, 6, 8A-9B; Ex. 1004, 5:3-5, 5:37-49, Fig. 1. In addition, each of the local audio devices of Strub and Woo wirelessly receives master timecodes from a master timecode generator and uses the timing information from the master timecodes to stamp the local audio. *See, e.g.*, 1003, 13:50-58, 63:50-60, 79:54-80:9; Ex. 1004, Abstract, 1:60-2:9, 2:39-48, 3:3-24, 3:37-67, 4:3-32, 4:62-64, 5:37-45, 7:26-50, 8:32-44, 8:60-9:4, 9:40-43, 9:56-62, Figs. 3-6.

Indeed, Woo itself provides express motivations to use its synchronization methods in a wireless, multi-recorder system such as Strub's. For example, Woo's master clock (1) provides accurate synchronization across recorders recording a performance, (2) can generate coordinated timecodes at independent sites proximate to recorders, (3) is simple to connect to the recorders, and (4) provides timecode output in a format that is compatible with a standard (SMPTE) used by commercially available equipment. Ex. 1004, 4:3-44; *see also* Ex. 1017, 29. In addition, modifying Strub's recording unit to include a conventional SMPTE timecode input port for receiving conventional SMPTE-formatted master timecodes from Woo's master clock would involve nothing more than combining familiar elements according to known methods to improve Strub's system and yield predictable results. Ex. 1002, ¶ 107.

Nagai and Gleissner teach audio recording systems, each having an audio input port—a “mike jack” or XLR plug connector—configured to couple to an audio input device for receiving locally generated audio. Ex. 1005, [0100], [0109]-[0110], [0139], Fig. 1, 2A; Ex. 1006, [0013], [0024], [0032], Fig. 1. Audio plugs and jacks such as those referenced in Nagai have existed for more than 130 years and have not changed substantially since the 19th century. *See, e.g.*, Ex. 1023; Ex. 1024. XLR connectors such as those referenced in Gleissner were so common as of the priority date of the '207 Patent that they already had been standardized. Ex. 1025, 1

(standard date March 2004), *passim* (copyright year 2004). A POSA would have considered it obvious to use those well-known standard connectors in Strub's local audio device because of their popularity, especially since Strub teaches the use of specific brands of commercially available microphone—*e.g.*, a Sanken CSS-5—which were configured to be plugged into an input port. Ex. 1003, 25:35-49. The Sanken CSS-5, for example, plugged into a standard XLR jack as described in Gleissner. Ex. 1026, 6,14 (“IN/OUT” connection for CSS-5 is XLR-5), *passim* (showing numerous other XLR-connected microphones); Ex. 1027, 7 (“IN/OUT” connection for CSS-5 is XLR-5), *passim* (numerous other XLR-connected microphones); Ex. 1002, ¶ 108.

Strub and Nagai both disclose gain adjustment circuits, Nagai's being controlled by a conventional thumbwheel. *See infra* Claim 33. A POSA would have been motivated to use Nagai's gain adjustment circuit in Strub's audio device, because (1) Strub's teaching of gain control conveys the benefit of gain-control generally, and (2) volume-control circuits using thumbwheels such as disclosed in Nagai, and their benefits, including simplicity and reliability, were extremely well known long before the priority date of the '207 Patent. *See* Ex. 1002, ¶ 109.

Moreover, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398,

420 (2007). Motivation to combine is particularly strong where “there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions.” *Id.* 421. This is especially true where the cited references teach (1) “all the limitations of [the challenged] claims,” and (2) the same “known problem” addressed by the challenged patent. *Ball Aerosol and Specialty Container, Inc. v. Ltd. Brands, Inc.*, 555 F.3d 984, 993 (Fed. Cir. 2009).

The '207 Patent sought to solve the problem of matching the timing between multiple recordings produced by one or more wireless devices. Ex. 1001, 1:45-2:11. It solved that problem by generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp the locally recorded audio data. *Id.* 3:16-19, 4:3-26, 4:52-5:10, 6:2-8, 10:56-11:4, 11:29-35, 14:52-60, 15:32-36, 16:44-47, 17:9-22, Figs. 3A, 4A, 4B, 5, 6. Strub and Woo recognized and solved that same problem in the same way. *See* Ex. 1003, 13:50-58 (local audio device includes “clock that is used to time-stamp the recording data obtained by the recording unit.”), 62:26-63:50 (receiving “current time that can be used as a clock to generate time-stamps” from a GPS or satellite service), 63:50-60, 75:25-57 (“SMPTE time code input ... to enable synchronization with an external device”), 79:54-80:9; Ex. 1004, Abstract (“A GPS receiver comprises a data output port for communicating time code information....Such time code information is input to

independent sound, film and video recorders....”), 1:60-2:9, 2:39-48, 3:3-24, 3:37-67 (synchronizing local timecode generator to a master timecode generator), 4:13-19 (“GPS navigation receiver with a data output port for communicating time codes in SMPTE format...to form a time-keeping base for the time code output.”), 5:5-10 (satellite receivers “provide[] highly-accurate date and time information to the recorder 14”), 5:21-29, 5:37-45 (recordings are “date and time tagged, using date and time information received by the recorders 14 and 16 over connections 20 and 24.”), 7:26-50, (using GPS-based time code generator as a master clock), 8:60-9:4 (“synchronizing film and video equipment”), 9:33-39, 9:45-55, 10:15-11:1, Figs. 1, 3-6; *see also* Ex. 1002, ¶ 111.

In addition, “when a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 550 U.S. at 417; (quoting *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)). Every element of the Challenged Claims appears in Strub, Woo, Nagai, and Gleissner. *See infra* § IX.A.2. Those elements are standard method steps using well-known, off-the-shelf audio-recording and radio components that would be familiar to any POSA. Ex. 1002, ¶ 112. There is nothing unpredictable about the claimed use of those components in a wireless audio-recording system. *Id.*; *see KSR*, 550 U.S. at 417 (To determine obviousness, “a court must ask whether the improvement

is more than the predictable use of prior art elements according to their established functions.”). Furthermore, the technology and operation of such components was well-understood in the relevant time period such that the combination of Strub, Woo, Nagai, and Gleissner would have had a high likelihood of success. Ex. 1002, ¶ 112.

Thus, since Strub and Woo teach the same kind of device used for the same purpose, since Strub and Woo identified the same problem identified in the '207 Patent and solved it in the same way, since the microphone jacks and plugs of Nagai and Gleissner were old elements performing the same function they had always been known to perform, since audio input ports in general have been known for over a century, since the combination of elements in the Challenged Claims is nothing more than “the predictable use of prior art elements according to their established functions,” and since the combination of Strub, Woo, Nagai, and Gleissner would have had a high likelihood of success, a POSA would have been motivated to combine Strub, Woo, Nagai, and Gleissner.

2. **The Combination of Strub, Woo, Nagai, and Gleissner Meets All Elements of All Challenged Claims**

As discussed below, the Preambles and every element of Claims 17-19, 21-23, 33, 34, 59, 60, and 66 are taught by Strub, Woo, Nagai, and/or Gleissner. To the extent Patent Owner alleges that any of Strub, Woo, Nagai, and Gleissner fails to teach any claim element, that element is provided by the other references. Further, to the extent the teachings of any of Strub, Woo, Nagai, and/or Gleissner are

substantively different for any given claim element, it would have been at least obvious to try the other references' implementation of that element, given the overall similarity in their purpose, design and operation.

a. **Claim 17.**

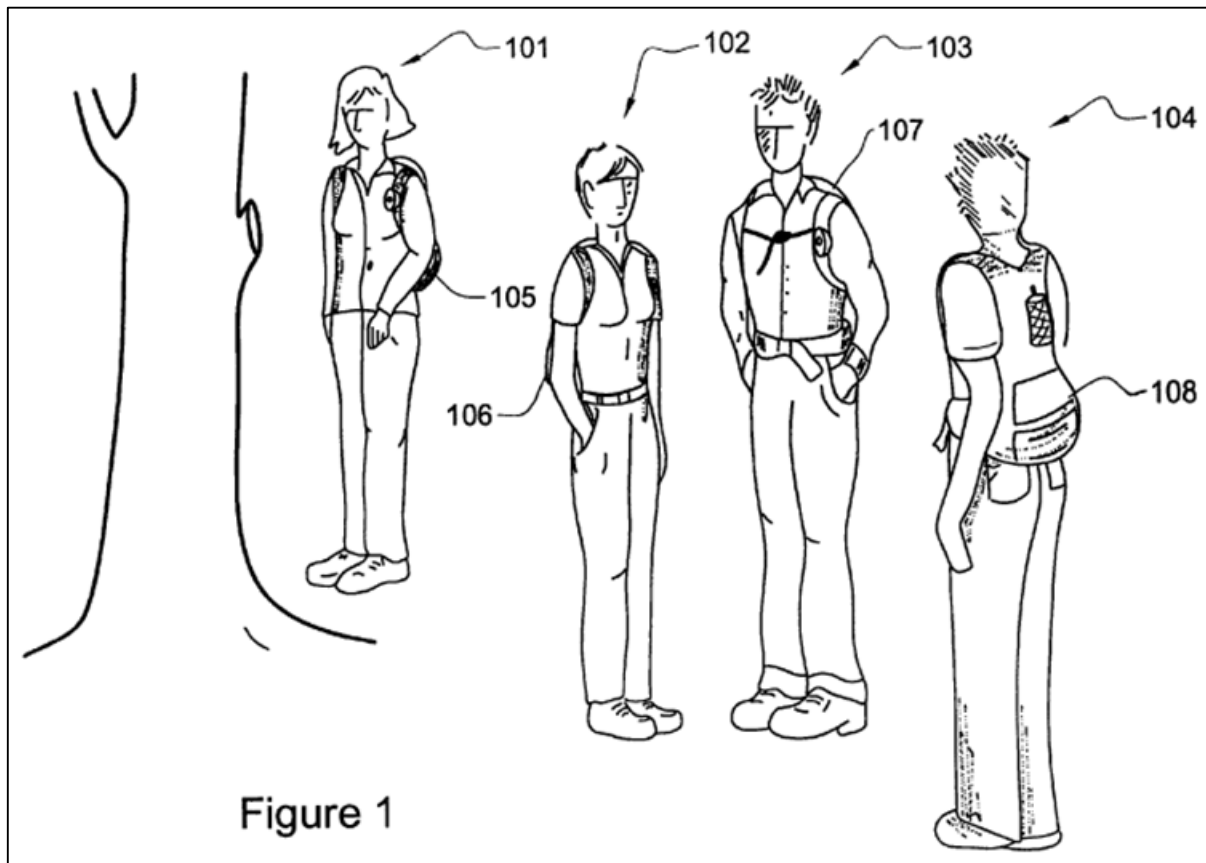
Challenged Claim 17 has essentially the same limitations as Claim 37 of the '814 Patent, which was found unpatentable in the Lectrosonics '1130 IPR and subsequently canceled, except that Claim 17 has the additional feature of wirelessly transmitting the local audio data to a remote receiver or recorder. *See* Ex. 1001, Claim 17; Ex. 1028, Claims 1, 37, IPR Certificate at 1:6-7. That feature is present in Claim 13 of the '307 Patent, which was found unpatentable in the Lectrosonics '972 IPR and subsequently canceled. Ex. 1015 , Claims 12, 13, IPR Certificate at 1:5.

(1) **17[Pre]: “At least one audio device wearable by a user for storing locally generated audio and transmitting the locally generated audio to a remote device, the remote device including at least one of a receiver, a recorder, a mixer, and combination thereof”**

Regardless of whether the preamble of Claim 17 is limiting, it is taught by Strub. In the Lectrosonics IPRs, the Board found that Strub teaches “a local audio device that records [(i.e., stores)] local audio and transmits the local audio to other remote devices” and “that the same local audio is stored at both the wearable local audio device as local audio data and the remote receiver/recorder as remotely

recorded audio data.” *See supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

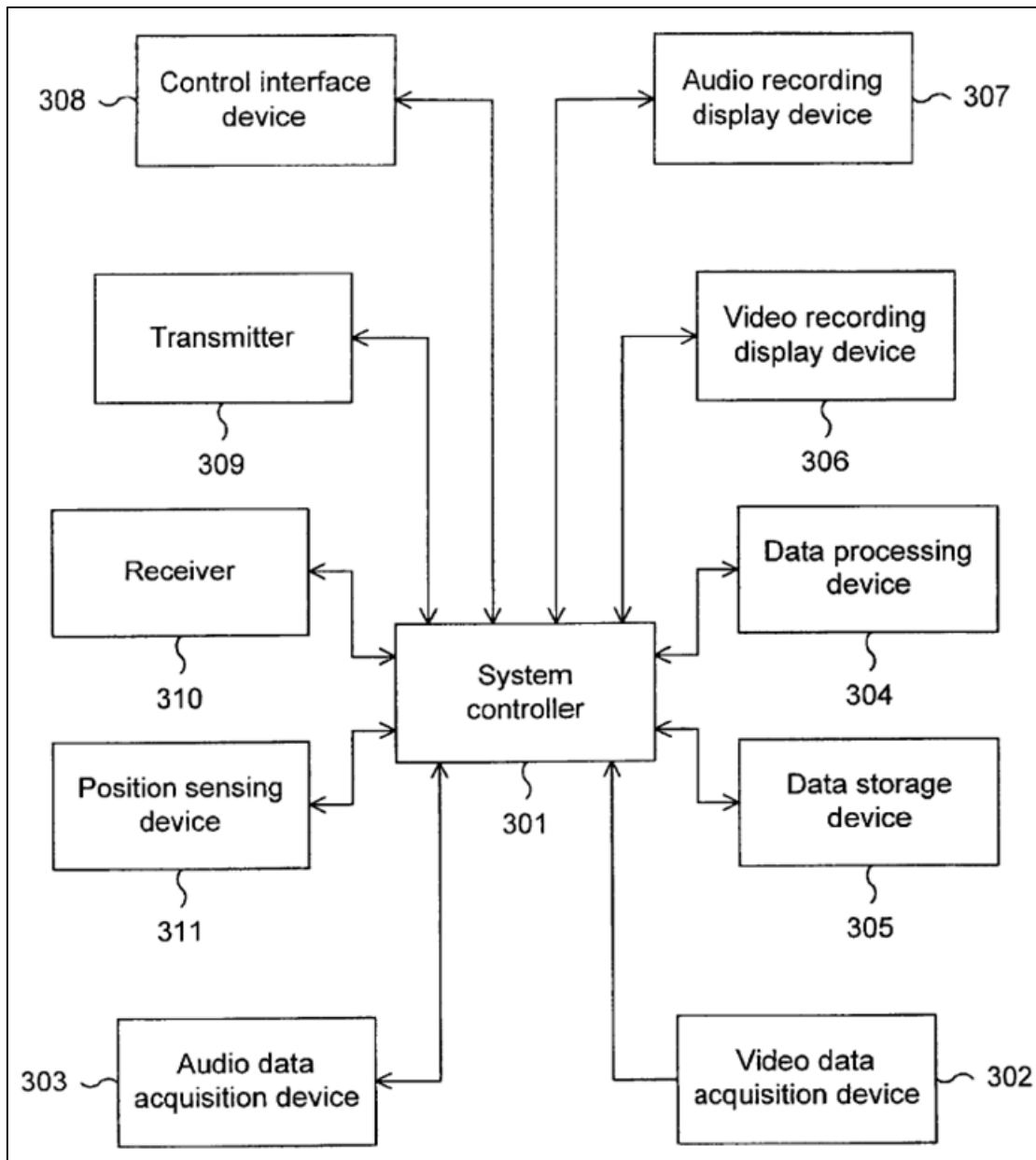
Specifically, Strub discloses at least one audio device—*e.g.*, one of recording units 105-108, 200, and 300, which are worn by a plurality of users as depicted in Fig. 1:



Each of Strub’s recording units is wearable by a user and is for storing locally generated audio and transmitting the locally generated audio to a remote device—*e.g.*, a different one of recording units 105-108, 200, and 300. *See* Ex. 1003, 8:10-29, 8:50-53, 11:32-50, 12:13–21, 12:31–39 (“[T]ransmitter 309 transmits signals...representing recording data acquired by the recording unit 300, so that such

recording data can be used by other recording units.”), 25:35–49, 35:54–65, 37:18–40, 38:1–4, Figs. 1 (recording units 105-108), 2 (recording unit 200), 3 (recording unit 300 including audio data acquisition device 303, transmitter 309, receiver 310, position sensing device 311, data storage device 305, system controller 301, and data processing device 304); *see generally id.* 35:53-38:39 (“Communication Between Recording Units”).

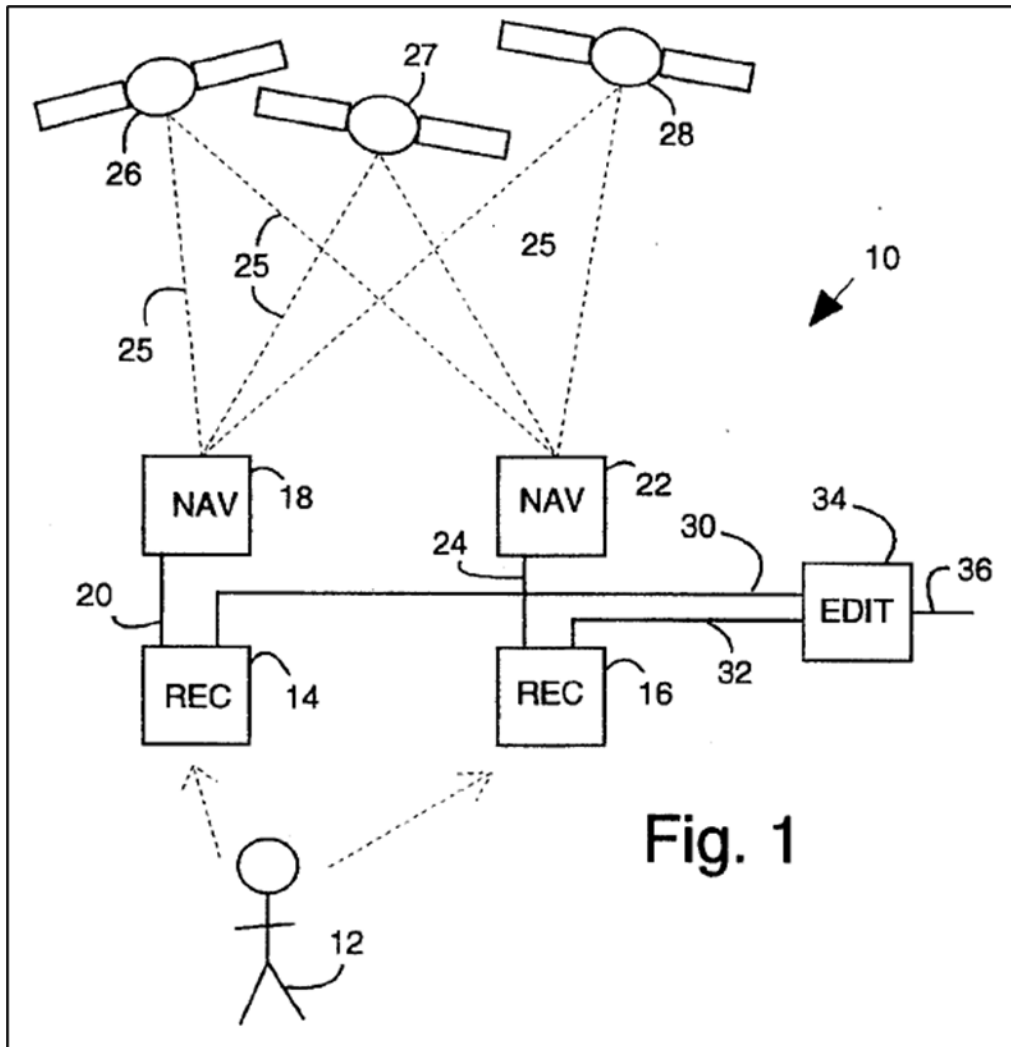
The internal components of an exemplary local audio device are depicted in Fig. 3 of Strub:

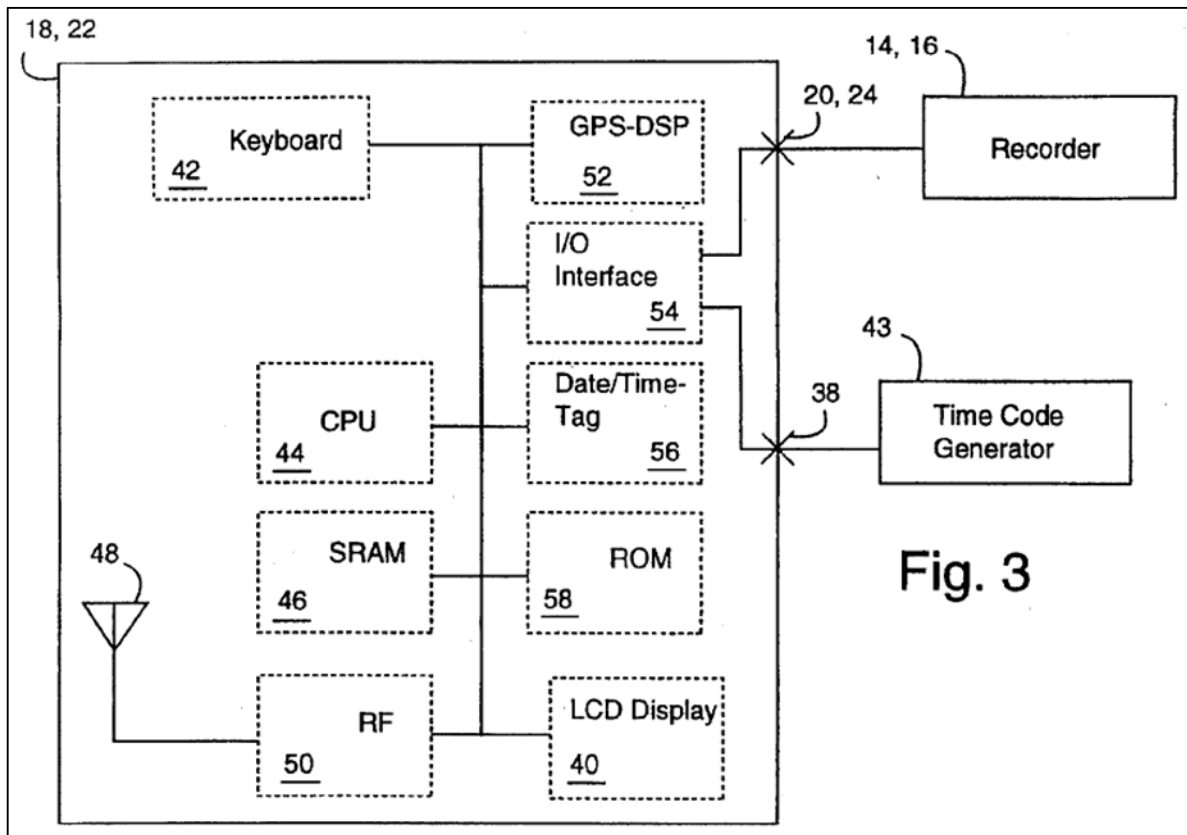


Each of Strub's local audio devices is wearable by a user. *Id.* 4:21-31 (“a small, lightweight, wearable recording unit”), 14:59-15:11 (“for the recorder to wear”), 16:66-17:24 (“wearable apparatus”), 38:65-39:11, 66:33-51 (“make the recording unit more comfortable to wear”), 67:54-68:10 (“emphasis on the wearability”), 72:9-19 (“recorder 850 is wearing the recording unit 800”).

The remote recording unit receives the transmitted audio data via a receiver (“receiver 310”) and records it. *Id.* 35:54-65 (“each recording unit can include a receiver that enables receipt of signals broadcast from other recording units that represent the recording data”; “enabling [the] recording unit to ... store, during the event, a recording being obtained”), 37:18-40 (“[R]ecording data from multiple recording units can be recorded simultaneously”), Fig. 3.

The preamble of Claim 17 is also taught by Woo. Woo’s system includes at least one local audio device—*e.g.*, an arrangement comprising recorder 14, GPS receiver 18, and time code generator 43, or an arrangement comprising recorder 16, GPS receiver 22, and time code generator 43—which stores locally generated audio and transmits the locally generated audio to a remote receiver and recorder—editing station 34, as depicted in Figs. 1 and 3:





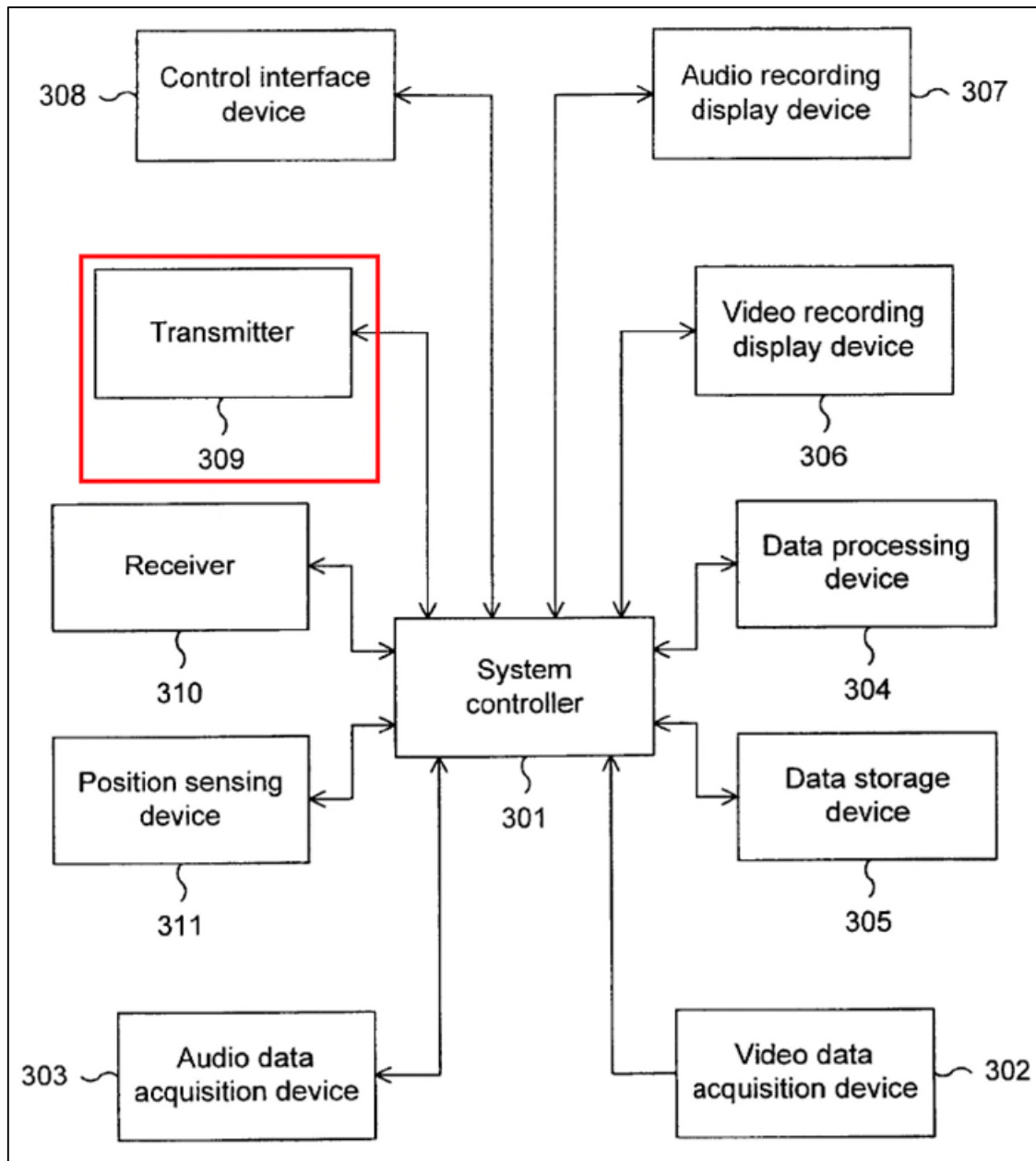
See also Ex. 1004, 5:3-5 (“A recorder 14 captures [a] performance from its vantage point while another recorder 16 independently captures the same performance from its own vantage point.”), 5:37-49 (“The connections 30 and 32 represent the communication of the respective recordings by wire, radio link and/or tape or film delivery to the editing station 34, e.g., a telecine suite or an audio layback [sic:playback] suite.”), 8:32-44, 9:40-43, 9:56-62, Figs. 1, 3, 4. A POSA would have understood that, in addition to comprising a recorder, editing station 34 necessarily would comprise a receiver in order to receive the audio signals from the local audio devices. Ex. 1002, ¶ 123. Communication between the local audio devices and the

remote receiver/recorder 34 are illustrated in Fig. 1. *See supra*; *see also* Ex. 1002, ¶ 123.

(2) **17[A]: “the at least one audio device comprising: a wireless transmitter”**

In the Lectrosonics IPRs, the Board found that Strub teaches that the local audio device wirelessly transmits the locally generated audio to a remote recorder, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

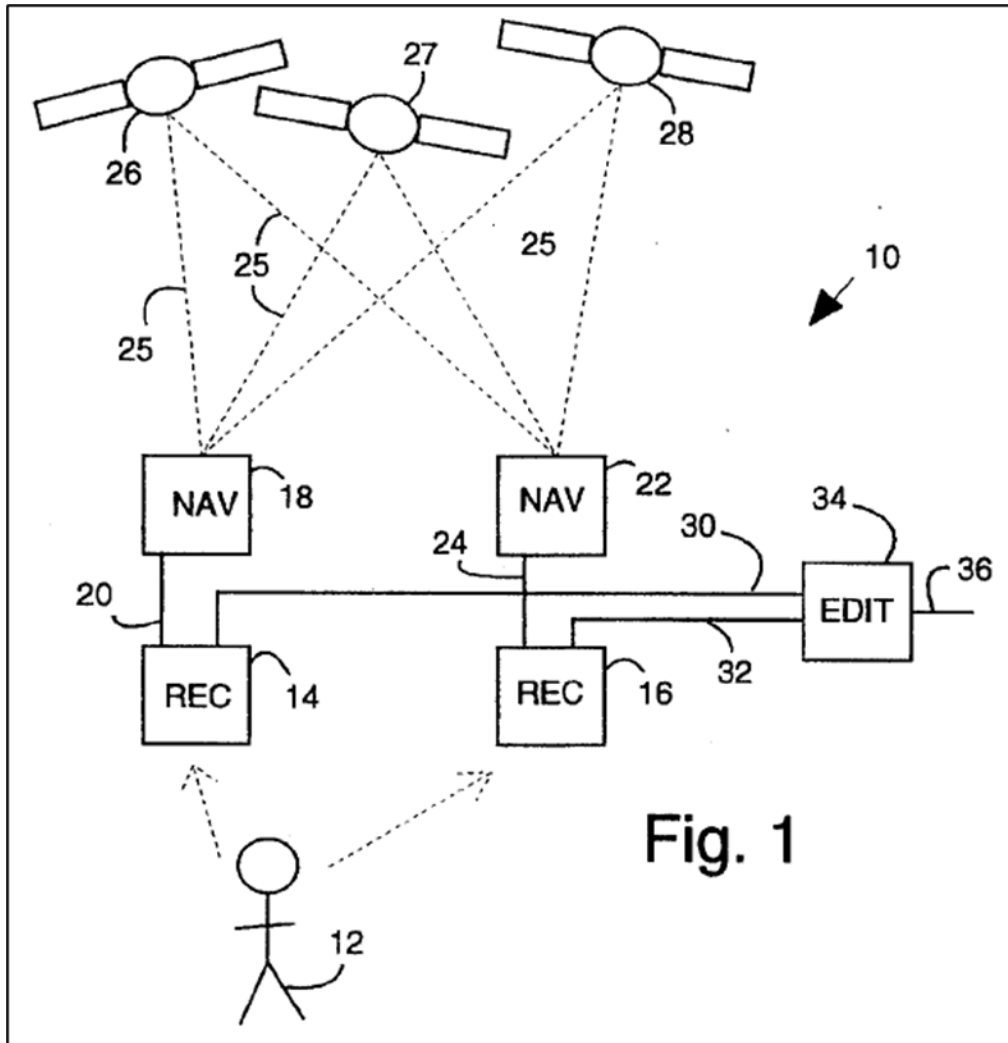
In particular, Strub’s recording unit includes a wireless transmitter 309 for transmitting audio to the other recording units:



Ex. 1003, Fig. 3 (annotated); *see also id.* 12:31-46, 35:51-36:29 (“transmitter that enables signals representing the recording data ... to be broadcast from the recording unit”).

Woo’s local audio device—*e.g.*, an arrangement comprising recorder 14, GPS receiver 18, and time code generator 43, or an arrangement comprising recorder 16,

GPS receiver 22, and time code generator 43—transmits locally generated audio (in one example, wirelessly) to the remote recorder—editing station 34:



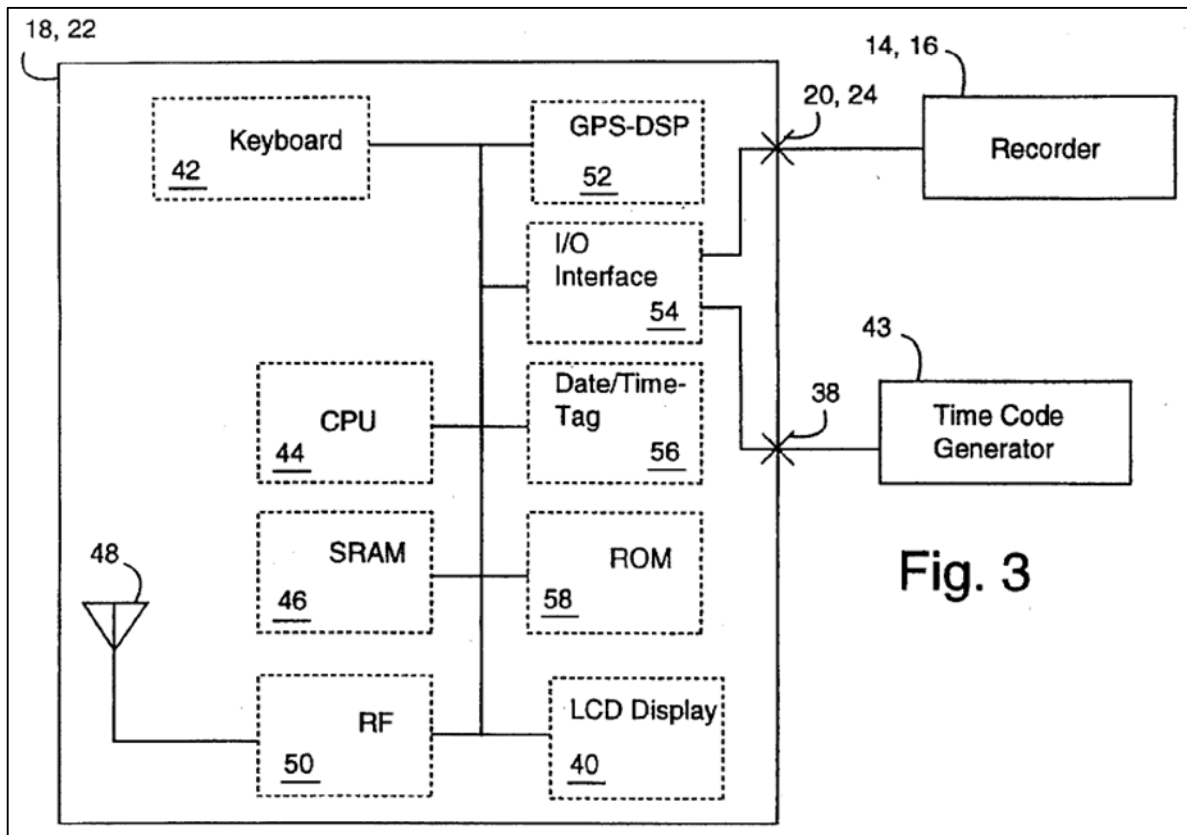


Fig. 3

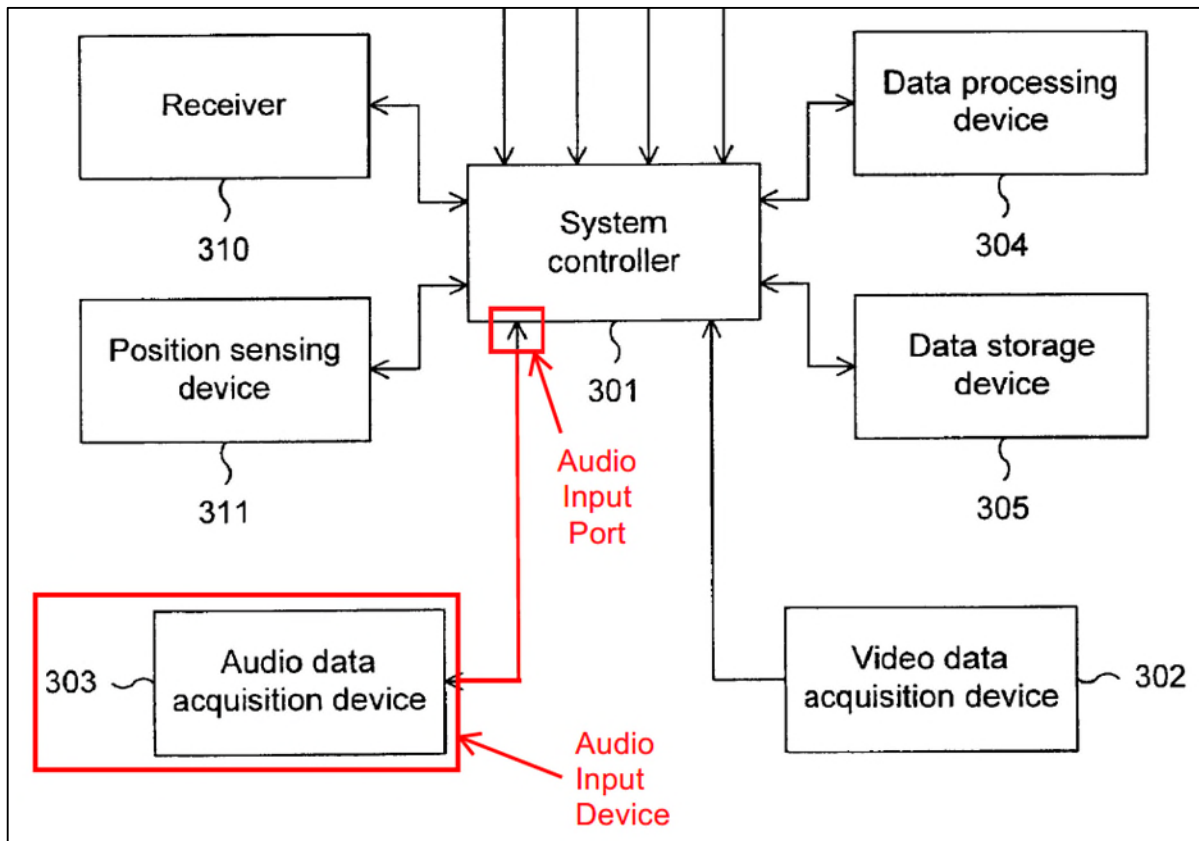
Ex. 1004, Figs. 1, 3; *id.* 5:37-49 (“The connections 30 and 32 represent the communication of the respective recordings by wire, **radio link** and/or tape or film delivery to the editing station 34, e.g., a telecine suite or an audio layback [sic:playback] suite.”), 8:32-44, 9:40-43, 9:56-62, Fig. 4 (emphasis added). A POSA would have understood that Woo’s “radio link” necessarily would have required a wireless transmitter in the recorder 14 or 16. Ex. 1002, ¶ 127.

(3) **17[B]: “an audio input port configured to couple to an audio input device to receive the locally generated audio”**

In the Lectrosonics IPRs, the Board found that each of Strub, Nagai, and Gleissner teaches an “audio input port for receiving said locally generated audio from an audio input device,” and that it would have been obvious to combine Strub

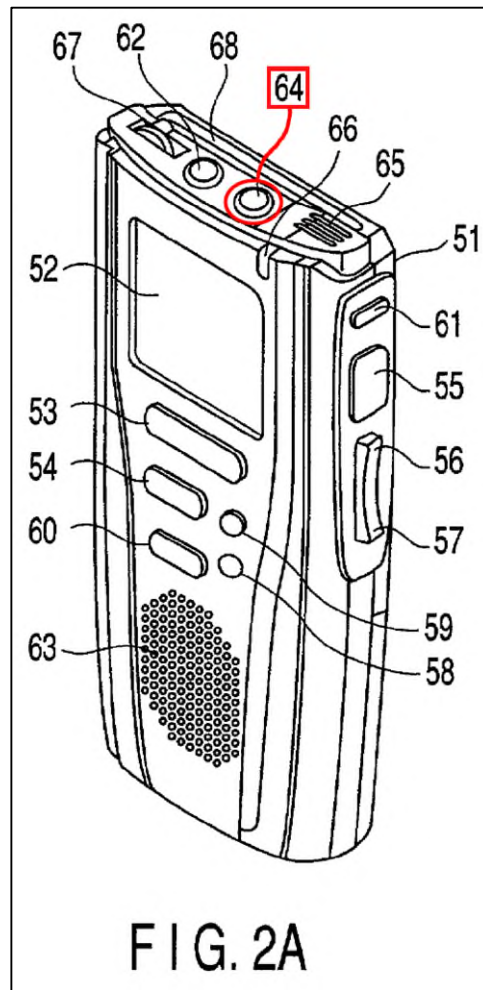
with Nagai or Gleissner. *Supra* § VI.D. Zaxcom is collaterally estopped from disputing those findings. *Id.*

For example, Strub’s audio data acquisition device 303 is an audio input device, specifically a microphone. Ex. 1003, 21:65-22:2 (“[A]ny suitable audio data acquisition device (e.g., microphone) can be used in a recording unit according to the invention.”); 22:64-23:31 (examples of microphones that can be used as the audio data acquisition device), 25:25-49 (same), 60:3-5 (“The audio data acquisition device itself can be a conventional microphone.”). The system controller 301 in Strub’s local audio recording unit 300 has a local audio input port—the controller’s connection to audio input device 303 (*e.g.*, microphone)—for receiving locally generated audio from the audio input device 303:



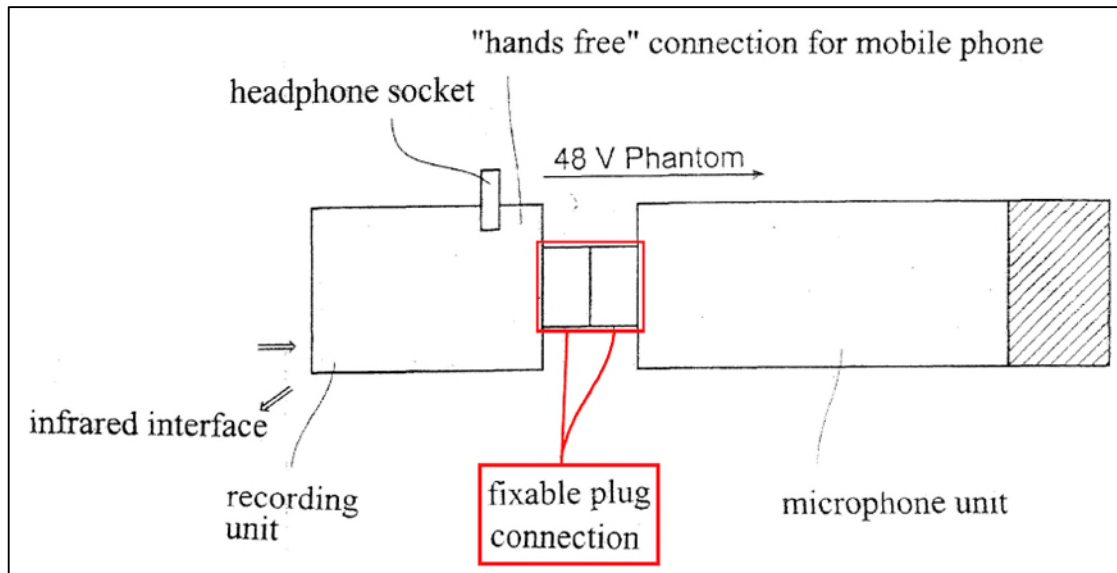
Ex. 1003, Fig. 3 (excerpted, annotated); *id.* 21:65-25:49, 68:63-69:67 (receiving audio from a microphone such as a “lavalier microphone”); *see also id.* 64:50-65:3 (connections between components using wired or wireless techniques known in the art, which would include a standard microphone jack). Furthermore, Strub states: “It can be advantageous to mount the audio...data acquisition device[s] so that the audio...acquisition device[s] [is] detachably attached.” *Id.* 69:23-26. A POSA would interpret Strub’s statement about detachability as meaning that the microphone is not soldered or hard-wired, but is connected to the local audio device through an audio input port such as a microphone jack and/or plug.

To the extent Zaxcom contends that Strub does not disclose Element 17[B], this element is taught by each of Nagai and Gleissner. For example, Nagai's audio recorder has an audio input port—"mike jack" 2 or 64—for coupling to an audio input device—specifically, an external microphone, or "mike [sic]"—to receive the locally generated audio:



Ex. 1005, Fig. 2A (annotated); *id.* [0100], [0109], and [0139], Fig. 1.

Gleissner's audio recorder has a conventional audio input port—an XLR plug connector—to couple to an audio input device—a microphone—to receive the locally generated audio:



Ex. 1006, Fig. 1 (annotated); *id.* [0013] (“[T]he recording unit can be coupled together with [a] microphone[] [using] an XLR connector....”), [0024], [0032]. Gleissner provides explicit motivation for using a standard microphone connector: “This has the advantage that the recording unit can be coupled together with practically any desired microphones, because an XLR connector is generally formed as the preferred embodiment in the case of microphones.” *Id.* [0013].

Woo refers to using a recorder 14 to “record the live performance of a performer 12, e.g., a singer or actor.” Ex. 1004, 5:1-5. A POSA would have understood that recorder 14 necessarily would have had an audio input port to couple

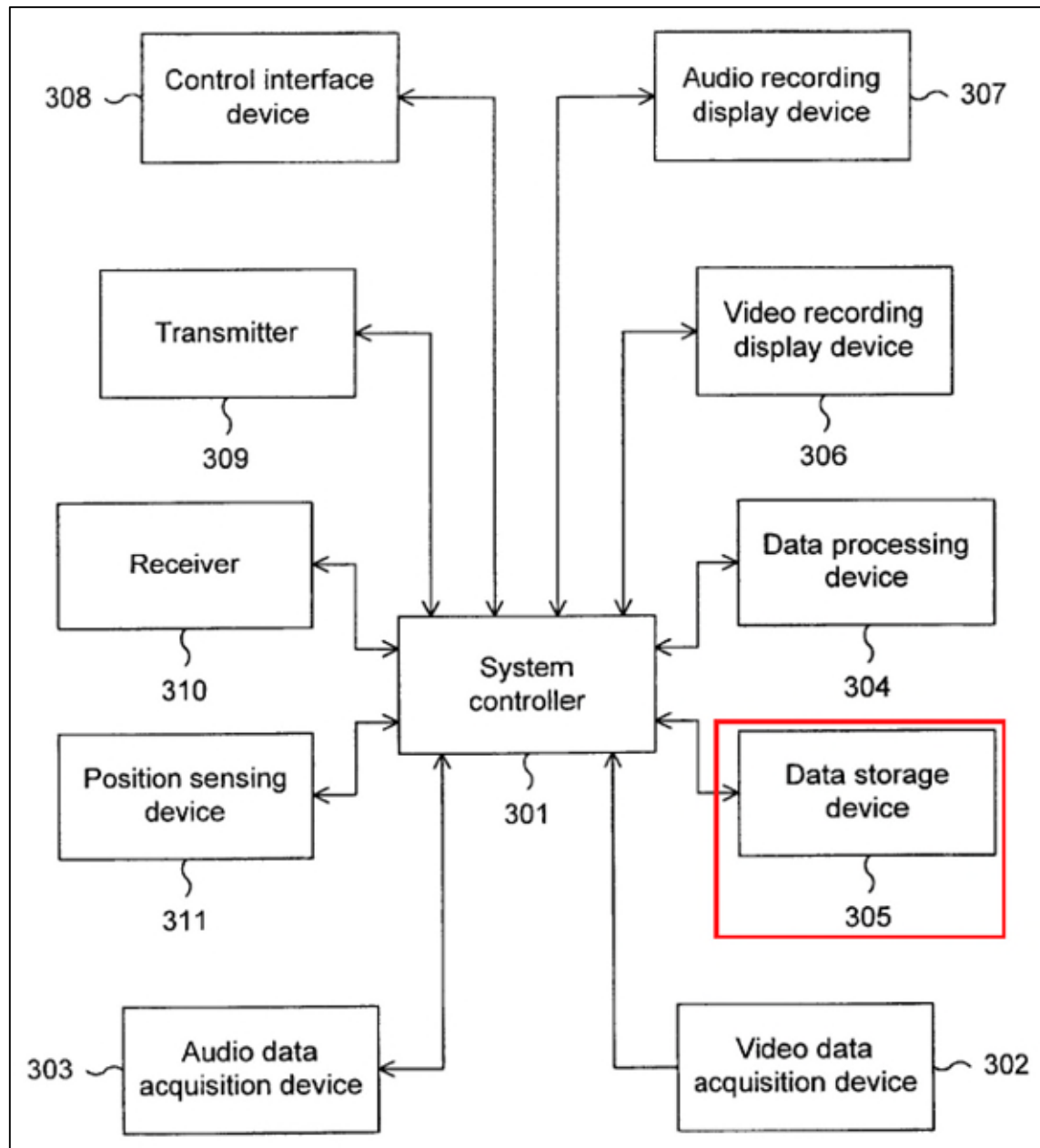
to a microphone in order to receive the sound from the performer. See Ex. 1002, ¶ 133.

Furthermore, a POSA would have been motivated to include Nagai's microphone jack or Gleissner's microphone plug connection in Strub's and/or Woo's local audio device because there were many different types and brands of microphones that were commercially available at or before the priority date of the '207 Patent and would be selected by the operator according to the requirements of the particular application, including the examples provided in Strub: analog or digital microphones, directional microphones, omni-directional microphones, lavalier microphones, microphones constructed to detect the spatial distribution of sound, lavalier stereo omni-directional microphones such as a Lectret 5200, stereo directional microphones such as a Sanken CSS-5, and arrays of multiple microphones to allow beam forming. Ex. 1003, 21:65-22:2, 22:65-23:31, 24:61-64, 25:35-49, 29:35-37, 31:37-45, 32:17-26, 68:63-69:18, 84:52-62; Ex. 1002, ¶ 134. A POSA would have understood the advantages of using Nagai's or Gleissner's standard microphone jacks and plugs to allow different kinds of microphones to be easily swapped in and out of Strubs' and Woo's audio recording systems to match the systems to the particular application and environment, and thus would have considered the combination obvious. Ex. 1002, ¶ 134.

(4) **17[C]: “a memory”**

In the Lectrosonics IPRs, the Board found that Strub teaches that the local audio device has a memory, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Specifically, Strub’s local audio device has at least one memory—*e.g.*, data storage device 305:



Ex. 1003, Fig. 3 (annotated).

Memory 305 may include a hard disk, a removable data storage medium such as a recordable-once DVD (DVD-R) disk or a recordable/writable DVD (R-W DVD) disk, or a non-volatile data storage device, such as solid state or flash memory.

Id., 27:36-51, 33:20-35:50, 76:6-34, 94:15-20, Fig. 3; Ex. 1002, ¶ 137.

(5) **17[D]: “a local timecode generator operable to generate a local timecode”**

In the Lectrosonics IPRs, the Board found that Strub teaches a local timecode generator, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

In particular, Strub’s local audio device (a recording unit) includes a local timecode generator—an internal clock—that generates a timecode—*e.g.*, a signal indicating the time—used to timestamp the recording data. Ex. 1003, 13:52-56 (“[T]he system controller can include a clock that is used to time-stamp the recording data obtained by the recording unit. (The time-stamps can be used, for example, to display the time at which a displayed recording was obtained....)”), 63:56-60 (“[A] recording unit according to the invention...includes an internal clock ... that ... can be used to accurately time-stamp data”), 79:54-80:9 (“recording unit ... typically includes a clock that is used to time-stamp recording data as the recording data is acquired”), Fig. 3.

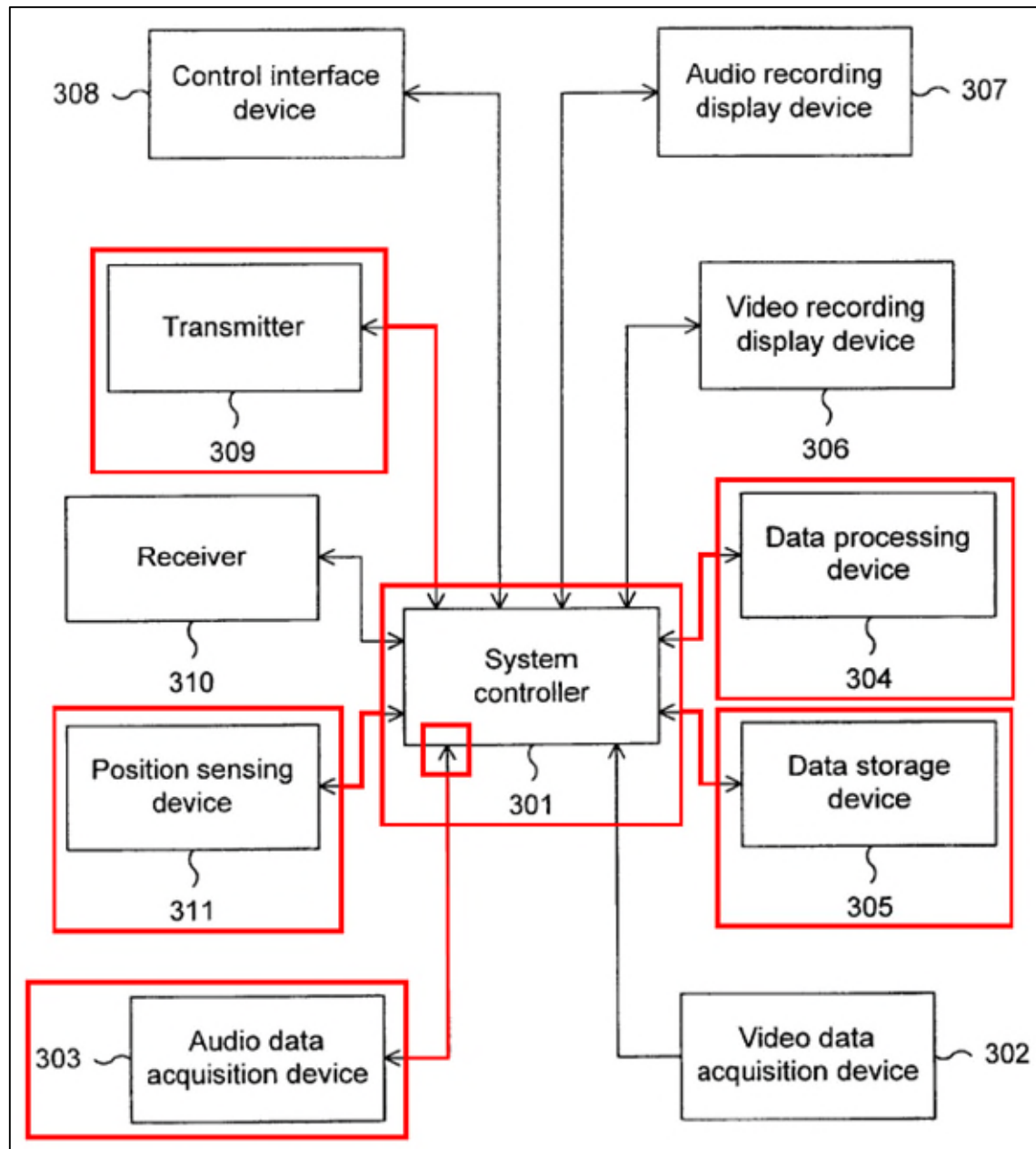
Woo’s local audio device includes a local time code generator 43. *Supra* Element 17[A].; Ex. 1004, 7:28-29, Fig. 3. The local timecode generator 43 generates SMPTE timecodes. Ex. 1004, 7:28-37 (“A commercially-available time code generator 43...generates time code...and will jam to...SMPTE/EBU time code.”), Fig. 3; *see also id.* 3:3-40 (local timecode generator can “follow the timecode off...a tape machine.”). In addition, Woo’s local audio device has a CPU

44 which executes one or more programs stored in ROM 58. *Id.* 8:8-9, Fig. 3. “The ROM 58...includes an application program for generating SMPTE time codes...” *Id.* 8:21-22. The CPU 44 running the time-code-generation program stored in ROM 58 also comprises a local timecode generator operable to generate a local timecode. Ex. 1002, ¶ 145.

(6) **17[E]: “a control unit coupled to the wireless transmitter, the audio input port, the memory, and the local timecode generator”**

In the Lectrosonics IPRs, the Board found that Strub teaches “at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator,” a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Strub’s local audio device includes a control unit—e.g., system controller 301 and/or data processing device 304—which is coupled to the wireless transmitter 309, the audio input port (the connection to audio data acquisition device 303), the memory (data storage device 305), and the local timecode generator (the device’s internal clock, GPS-based position sensing device 311, and/or SMPTE timecode input circuit):



Ex. 1003, Fig. 3 (annotated); *id.* 12:4-13, 13:36-14:13 (describing operation of “system controller”).

In addition, a POSA would have considered it obvious to couple Strub’s control unit 301 to an audio input port such as Nagai’s “mike jack” or Gleissner’s

XLR plug connector, described *supra* Element 17[B]; *see also* Ex. 1006, [0013] (advantages of using a standard microphone connector); Ex. 1002, ¶ 148.

(7) **17[F]: “the control unit operable to: (i) receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode,”**

In the Lectrosonics IPRs, the Board found that Strub teaches receiving master time data, that Woo discloses a “master timecode generator for generating a plurality of master timecodes” and “jam synchroniz[ing]” a local clock with a master time clock “just as disclosed by the [related ’902 and ’814] patent[s],” and that a POSA would have been motivated to use Woo’s synchronization techniques in Strub’s system—findings that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

For example, Strub discloses receiving a master timecode—*e.g.*, GPS time information—from a master timecode generator—*e.g.*, a GPS satellite or SMPTE timecode source—and jam synchronizing the local timecode generator—the internal clock—to the master timecode generator using the master timecode. Ex. 1003, 62:53-54 (position sensing device 311 can be a GPS receiver), 63:50-60 (“[T]he recording unit need only be exposed to a GPS satellite for about a minute to enable the time signals to begin. Further, after that point, clock drift occurs slowly, even if the recording unit is blocked from the GPS satellites for a period of time. Additionally, a recording unit according to the invention typically also includes an

internal clock, as described above, that, while not as accurate as the GPS time signals, can also be used to accurately time-stamp data.”); 79:63-80:7 (“[The] recording unit...includes a clock that is used to time-stamp recording data as the recording data is acquired.” However, adequate synchronization requires that each recording unit “include a GPS receiver” and not be “shielded from a GPS transmitter system for an extended period of time....”), 75:25-57 (“SMPTE time code input ... to enable synchronization with an external device”), Fig. 3 (position sensing device 311); *see also* Ex. 1002, ¶ 152. As the ’207 Patent explains, “jam” synchronizing is the process of causing the output of a local time code generator (e.g., a clock) to match the output of the master time code generator. *See* Ex. 1001, 14:52-60. Thus, a POSA would have understood that Strub’s use of a GPS signal or SMPTE timecode input to synchronize the internal clock comprises facilitates jam synchronizing the internal time clock to a master timecode generator.

To the extent Zaxcom contends that Strub does not disclose Element 17[F], this element is taught by Woo. Specifically, Woo discloses receiving a master timecode from a master timecode generator—*e.g.*, one or more of GPS satellites 26-28—and jam synchronizing the local timecode generator 43 to the satellite(s) using the master timecode. Ex. 1004, 3:37-45 (describing the “jam-sync process”), 4:13-19 (“[A]n embodiment of the present invention comprises a GPS navigation receiver with a data output port for communicating time codes in SMPTE format. The

conventional date and time sentence output of the GPS navigation receiver is combined with a highly-accurate one pulse-per-second ($\pm$ one microsecond) to form a time-keeping base for the time code output.”), 4:45-48, 5:5-10 (“A navigation satellite receiver 18 provides highly-accurate date and time information to the recorder 14 over a connection 20. Similarly, another navigation satellite receiver 22 provides highly-accurate date and time information to the recorder 16 over a connection 24.”), 5:21-29 (“Both navigation satellite receivers 18 and 22 receive a plurality of microwave radio transmissions 25 from a constellation of orbiting satellites, which are represented by a set of three satellites 26-28....Each satellite 26-28 has an atomic clock synchronized system-wide to provide highly accurate time clock information, e.g., the time-of-day and the calendar date.”), 5:54-67, 7:18-25, 7:26-47 (“commercially-available time code generator 43...will jam to both the output connection 38 and normal SMPTE/EBU time code”), 7:48-8:59, 8:60-9:4 (“synchronizing film and video equipment”), 9:5-19, 9:33-39, 9:45-55, 10:15-64, Figs. 2-4; Ex. 1002, ¶ 153.

(8) **17[G]: “(ii) transmit the locally generated audio to the remote device via the wireless transmitter; and ”**

In the Lectrosonics IPRs, the Board found that Strub teaches that the local audio device wirelessly transmits the locally generated audio to the remote device, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

In particular, Strub’s local audio device includes a wireless transmitter—*e.g.*, transmitter 309—which “transmits signals (‘recording data signals’) representing recording data acquired by the recording unit 300, so that such recording data can be used by other recording units.” Ex. 1003, 12:31-34, 35:53-38:39 (“Communication Between Recording Units”). Fig. 3. From the perspective of the local audio device, the other recording units are remote devices.

Woo’s local device transmits the locally generated audio to the remote device. *See supra* 17[Pre]; Ex. 1002, ¶ 156.

(9) **17[H]: “(iii) store the locally generated audio in the memory as audio data; and”**

In the Lectrosonics IPRs, the Board found that Strub teaches storing the locally generated audio as audio data in the memory of the local audio device, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Specifically, the system controller 301 in Strub’s local audio device acquires locally generated audio via audio data acquisition device 303 and stores the audio in memory—*i.e.*, data storage device 305. Ex. 1003, 12:10-21 (“[A]udio data acquisition device 303 acquire[s]...audio recording data...representing the content of the event being recorded....[T]he acquired recording data can be stored directly in the data storage device 305, or can first be processed (e.g., compressed) in the data processing device 304....”), Fig. 3.

Woo's system also stores—*i.e.*, records—locally generated audio in a memory as audio data. Ex. 1004, 4:62-64 (referring to “sound and picture recordings” stored in “a plurality of independent recording devices”), 5:1-5 (“A recorder 14 captures [a live] performance from its vantage point while another recorder 16 independently captures the same performance from its own vantage point.”), 5:37-45 (referring to “recordings” stored within recorders 14 and 16); Ex. 1002, ¶ 159.

(10) **17[I]: “(iv) stamp at least a portion of the audio data with the local timecode.”**

In the Lectrosonics IPRs, the Board found that Strub teaches a “local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory,” a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

For example, the system controller 301 in Strub's local audio device “can include a clock that is used to time-stamp the recording data obtained by the recording unit. (The time-stamps can be used, for example, to display the time at which a displayed recording was obtained, to locate particular stored recording data, or to enable post-event synchronization of the display of recordings obtained by different recording units.)” Ex. 1003, 13:50-58, 63:56-60 (“an internal clock ... used to accurately time-stamp data”). The time stamps comprise timecodes. *Id.* 6:65-7:24 (establishing “temporal correspondence” with stored “visual and aural” data by

storing a “**time code** on the videotape”); 29:42-62 (digital disk recorder records both audio and visual data and also “record[s] other types of data (e.g.,...**time codes**)” with the recorded data.); 77:24-28 (identifying “Hi-8 with RC time code and mini-DV” as exemplary portable video recorders that “**write a time code to the linear data storage medium**...indicating the time at which corresponding recording data was obtained.”); 78:7-40 (storing timecodes on videotape); 84:20-25 (emphasis added).

Woo’s local audio device includes “a date and time tag unit 56 and a read only memory (ROM) 58.” Ex. 1004, 7:59-60, Fig. 3. “The ROM 58...includes an application program for generating SMPTE time codes....” *Id.* 8:21-22. In addition, Woo’s local audio device can employ “commercially-available time code generator 43” to generate time codes. *Id.* 7:28-29, Fig. 3. Based on the local timecodes, the date and time tag unit 56 provides time stamps—*e.g.*, “date and/or time tag[s]”—which are used to stamp at least a portion of the local audio data, and the resulting stamped local audio data is stored as a recording in a memory in the recorder 14 or 16. *Id.*, 8:11-21 (“The date/time-tag unit 56 associates a date and/or time tag with each...position determination stored in SRAM 46. Time code information is generated for connections 20, 24 and 38 by combining a one-pulse-per-second output from the GPS-DSP 52 with the conventional date and time information available from deciphering the navigation satellite transmissions.”), 8:25-44 (“A step 104 derives a first date and time code information with the first navigation

satellite receiver. A step 106 tags a first recording generated by the first performance recording device with the date and time code information....A step 110 extracts a second date and time code information with the second navigation satellite receiver. A step 112 tags a second recording generated by the second performance recording device with the date and time code information.”), Figs. 3, 4; *see also id.* 1:60-2:1 (time codes stored with recorded content), 5:37-45 (“The recorders 14 and 16 each transmit their respective recordings over a pair of connections 30 and 32 to an editing station 34. Each recording delivered to the editing station 34 has been date and time tagged, using date and time information received by the recorders 14 and 16 over connections 20 and 24.”); Ex. 1002, ¶164.

- b. **Claim 18: “The at least one audio device of claim 17, wherein the control unit stores the locally generated audio in the memory and transmits the locally generated audio to a remote device substantially simultaneously.”**

The system controller 301 in Strub’s local audio device—*e.g.*, recording unit 300—stores the locally generated audio in memory—data storage device 305—and transmits the locally generated audio to a remote device—one or more of the other recording units, *e.g.*, 105-108. *See supra* 17[Pre]; Element 17[H]. The transmission is sent to the remote device at the same time that the recording is “being obtained” by the local device—*i.e.*, the storage and transmission occur substantially simultaneously. Ex. 1003, 1:26-35 (“The invention...relates to recording an event

in which multiple persons participate..., ...more particularly, to recording of the event by multiple participants (i.e., from multiple points of view), often simultaneously.”), 4:54-57 (“[A] recording unit according to the invention can be adapted to enable recordings to be shared between or among recording units **during the event.**”); 10:25-49 (“[A] recording unit according to the invention can be adapted to enable recordings to be shared between or among recording units **during the event** so that recorders can observe **recordings that** have been, or **are being, obtained by other recording units.**”), 35:61-36:2 (“[A] recording unit [can] display and/or store, **during the event**, a recording being obtained by another recording unit.”), 38:8 (“Recording data can be transmitted as acquired.”), 38:20-24 (“Compression...enable[s] enable more channels of recording data to be transmitted, i.e., more recording units can simultaneously transmit data), 44:48-45:7 (“display device...capable of **simultaneously** displaying multiple visual recordings at one time...to enable[] a [user] to be cognizant of the content of the visual recordings **being obtained by more than one recording unit,**”); 79:54-80:9 (“recordings of the same event that were simultaneously obtained by different recording units”); 85:18-23.

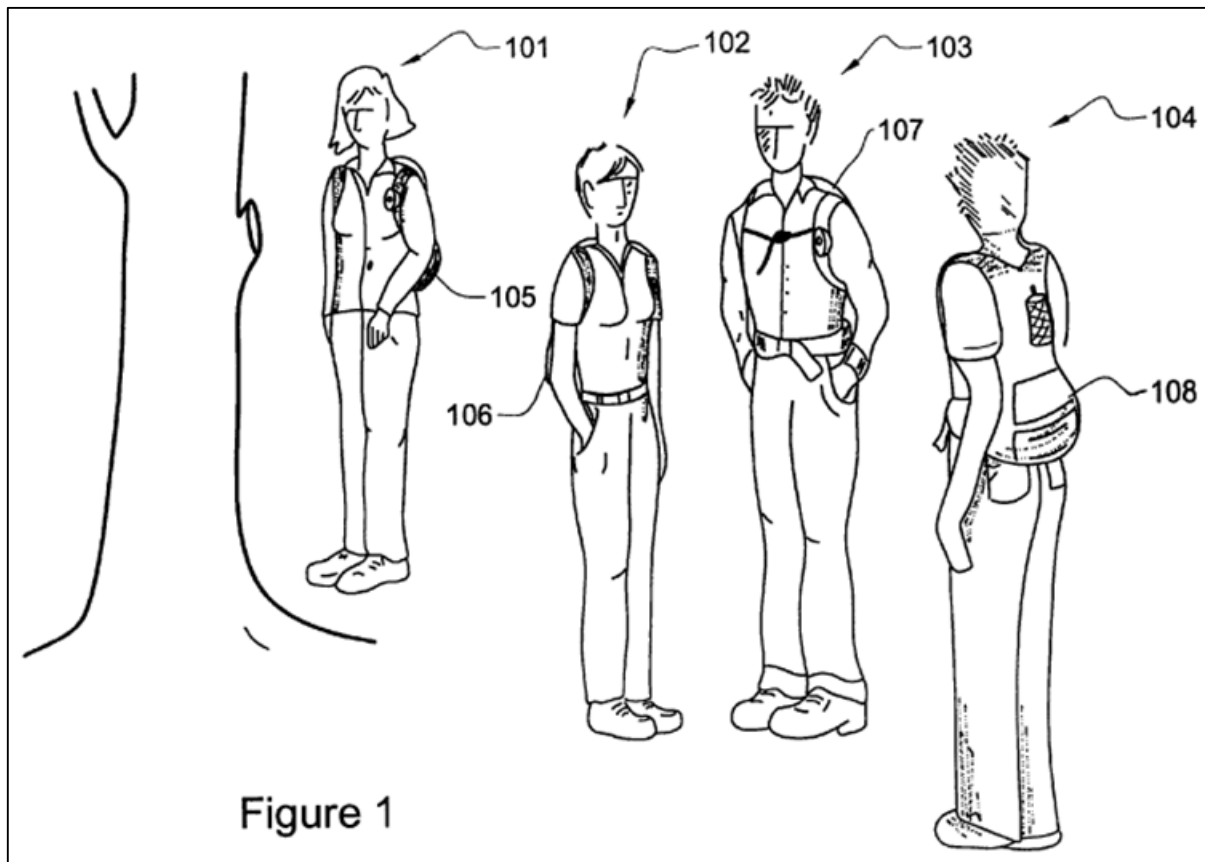
To the extent Zaxcom contends that Strub does not disclose the additional limitations of Claim 18, those limitations are taught by Woo. Woo’s local audio device—*e.g.*, an arrangement comprising recorder 14, GPS receiver 18, and time

code generator 43, or an arrangement comprising recorder 16, GPS receiver 22, and time code generator 43—stores locally generated audio and transmits the locally generated audio to a remote recorder—editing station 34. *See supra* 17[Pre]; Element 17[H]. Woo teaches that the transmission can be done in real time—*i.e.*, at the same time that the audio is being locally stored. *Id.* 8:51-54 (“In step 114, ***the combining and generating may be done in real-time*** with the performance such that the third recording is delayed from the performance by an insubstantial amount of time.”), 10:7-10 (“***the combining and generating are done in real-time*** with said common event such that said third recording is delayed from said common event by an insubstantial amount of time.”); *see* Ex. 1002, ¶ 181.

- c. **Claim 19: “The method of claim 18, wherein the at least one of the group consisting of a receiver, a recorder, and combinations thereof is not worn by a creator of locally generated audio and is located remotely from the at least one local audio device.”**

In Strub, each of the “recording units” 105-108 and 300 serves as a remote receiver and recorder from the perspective of the other recording units, since it receives and records audio data from the other recording units. *See supra* 17[Pre]; Element 17[H]; *see also supra* § VI.D (Board’s prior finding that Strub teaches a remote receiver/recorder, which Zaxcom is collaterally estopped from disputing). In other words, one person (recorder) is wearing a first recording unit (*e.g.*, one of units 105-108) for recording locally generated audio, and a different person is wearing a

second recording unit (*e.g.*, a different one of units 105-108) that receives the locally generated audio from the first person and remotely records that audio on the second recording unit. *See, e.g.*, 12:16-19 (“Depending upon the particular implementation of the recording unit 300, the acquired recording data can be stored in the data storage device 305....”); 12:31-34 (“The transmitter 309 transmits signals...representing recording data acquired by the recording unit 300, so that such recording data can be used by other recording units....”); 35:53-65 (“The transmitters and receivers enable recording data to be communicated between recording units during recording of an event by the recording units, thus enabling a recording unit to display and/or store, during the event, a recording being obtained by another recording unit.”); 7:44-47, Fig 3 (depicting each recording unit as having a transmitter 309 and receiver 310).



Ex. 1003, Fig. 1.

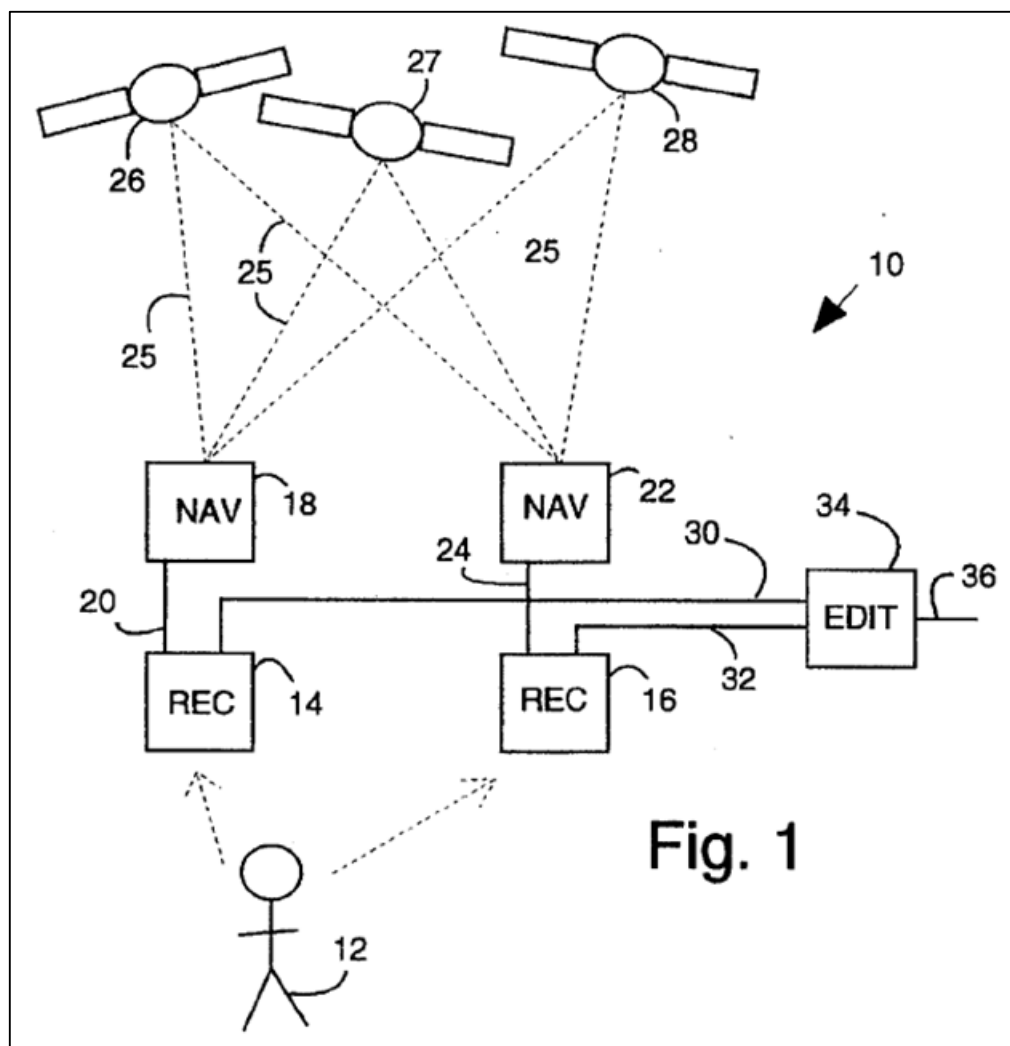
Strub further discloses that the persons wearing the recording units in Figure 1 may be either be “participating” in the event, or merely “observing” the event. 8:7-20. A POSA would therefore understand, for example, that participant 103 possesses local recording unit 107 that is recording the locally generated audio. Transmitter 309 of recording unit 107 would transmit this audio data to remote observer 101, where receiver 310 of remote recording unit 105 would receive the locally generated audio and store it in data storage device 305.

In sum, Stub discloses this claim because recording unit 105 comprises a recorder and a receiver that is being worn by an observer 101 rather than by a “creator,” and observer 101 is remote from participant 103 who is wearing the local audio device 107. At a minimum, this would have been obvious from Stub’s disclosure.

Furthermore, Strub teaches that its recording unit—which can be a remote receiver/recorder—need not be worn by anyone, but instead is detachable so that it can be mounted on an inanimate object such as a bicycle or can be mounted/placed in any other suitable location. *Id.* 65:23-29 (“[T]he visual data acquisition device can be mounted on the recorder, while the rest of the recording unit is mounted on [a] bicycle (this may be desirable to reduce the weight carrier by the recorder, thus increasing the recorder’s comfort....”), 69:19-29 (“It can be particularly advantageous to detachably attach the visual data acquisition device so that the visual data acquisition device can be mounted at various locations....”). A POSA would therefore understand that the bicycle-mounted or location-mounted recording unit comprises a remote receiver (310) and recorder that is not worn by a creator of locally generated audio. At a minimum, this would have been obvious from Stub’s disclosure. For example, a POSA reading Strub’s discussion of the detachability of its recording units would have considered it obvious to operate the remote recording units without anyone wearing it—for example, by placing it on a table and allowing

it to continue receiving and recording audio from other units while being remote from the other units. Ex. 1002, ¶ 185.

In Woo, the editing station 34 comprises a remote receiver and recorder. See *supra* 17[Pre]; Element 17[H]. The editing station 34 is remote from the local audio device—which comprises recorder 14, GPS receiver 18, and time code generator 43, or recorder 16, GPS receiver 22, and time code generator 43:



Ex. 1004, Fig. 1; *id.* Fig. 3. The editing station is not worn by anyone, including a creator 12 of the locally generated audio. *Id.* 5:1-5, Fig. 1; see Ex. 1002,

¶ 187. The editing station is further described as a “suite.” Ex. 1004, 5:39-42. In view of the foregoing, a POSA would understand Woo to teach this claim because editing station 34 comprises a remote receiver and recorder that is not worn by any creator of locally generated audio, and the editing station 34 is remote from local audio device 14/18/43. See Ex. 1002, ¶ 187. At a minimum, this would have been obvious from Woo’s disclosure. *Id.*

- d. **Claim 21: “The at least one audio device of claim 17, wherein the audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.”**

In the Lectrosonics IPRs, the Board found that Strub teaches adding a local audio device identifier and a performer identifier to the local audio data, a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

Specifically, Strub’s local audio data can include one or more “marks” identifying a track, device, or performer. Ex. 1003, 52:19-33 (marks indicating subject matter or conditions or recorded track), 52:62-53:44 (marks identifying recording device, person making the mark, or “person present in the content”); Ex. 1002, ¶189.

- e. **Claim 22: “The at least one audio device of claim 17, wherein at least one of the group consisting of the local timecode, the master timecode, and combinations thereof includes at least one of the group consisting of time data, frame data, type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.”**

In the Lectrosonics IPRs, the Board found that Strub teaches master time data including hour, minute, and/or second data—*i.e.*, a master timecode which includes time data—a finding that Zaxcom is collaterally estopped from disputing. *Supra* § VI.D.

For example, the local timecodes generated by the internal clock in each of Strub’s local audio devices comprise time-stamps—*i.e.*, time data. *See, e.g.*, Ex. 1003, 13:48-67 (“clock...used to time-stamp the recording data”; time-stamps represent “the time at which a displayed recording was obtained”), 63:56-60 (“an internal clock ... used to accurately time-stamp data”), 77:24-28 (describing portable video recorders that “write a time code to the linear data storage medium...indicating ***the time at which corresponding recording data was obtained.***”); *see also id.* 7:11-24 (establishing “temporal correspondence” with stored “visual and aural” data by storing a “time code on the videotape”), 79:63-80:9, Fig. 3 (emphasis added); *see also supra* Element 17[D]. Strub also discloses including a track identifier in the local timecode used to stamp the audio data. *See supra* Claim 21. In addition, Strub

discloses monitoring recorder transport status—*e.g.*, “whether the recording unit is transmitting or not.” Ex. 1003, 48:18-41.

Strub’s master timecodes—GPS time signals or signals from a SMPTE timecode source—comprise GPS time data and/or SMPTE timecodes. Ex. 1003, 63:41-49 (“GPS time signals” “representing the current time”); *See also supra* Element 17[F]. SMPTE timecodes include time data—specifically, “Twenty-six [bits of a SMPTE timecode] are used to store time information.” Ex. 1004 (Woo), 3:20-22.

Woo’s local timecode generator 43 and CPU 44 running the timecode-generation program stored in ROM 58 both generate SMPTE local timecodes which include time data. *See supra* Element 17[D]; Ex. 1004, 1:21-40 (time code clock provides data “in hours, minutes, seconds and frames”), 2:3-9, 2:42 (time codes include “time bits”), 3:20-22 (“Twenty-six [bits of a SMPTE timecode] are used to store time information.”), ; *supra* Element 17[I] (time-tagging local data).

The master timecodes that Woo uses to synchronize its local timecode generator 43 are received from one or more of GPS satellites 26-28. *See supra* Element 17[F]. The GPS signals include time data. Ex. 1004, 4:13-19 (GPS signal provide “highly-accurate one pulse-per-second ($\pm$ one microsecond) to form a time-keeping base for the time code output.”), 5:5-10 (“A navigation satellite receiver 18 [or 22] provides highly-accurate date and time information....”), 5:21-29 (“Each

satellite 26-28 has an atomic clock synchronized system-wide to provide highly accurate time clock information.”), 7:18-25, Figs. 2, 4; *see also supra* Element 17[F], Ex. 1002, ¶ 194.

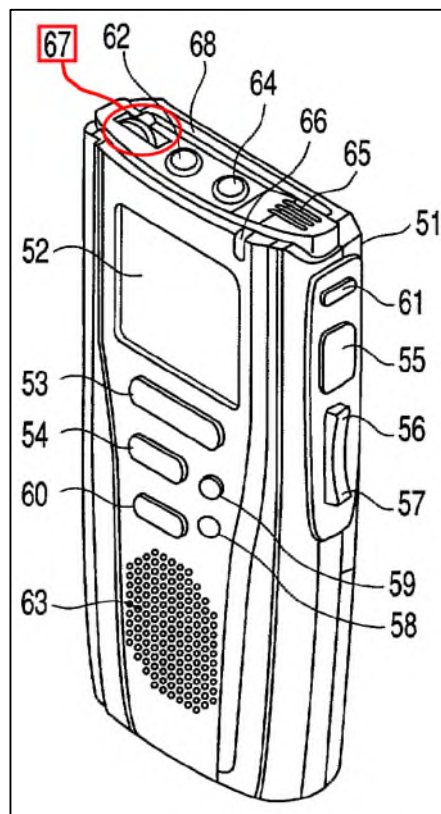
- f. **Claim 23: “The at least one audio device of claim 17, wherein at least one of the master timecode, the local timecode, and combinations thereof is SMPTE compliant timecode.”**

Strub’s master timecodes and Woo’s local timecodes are SMPTE-compliant. *See supra* Claim 22; Ex. 1002, ¶ 195.

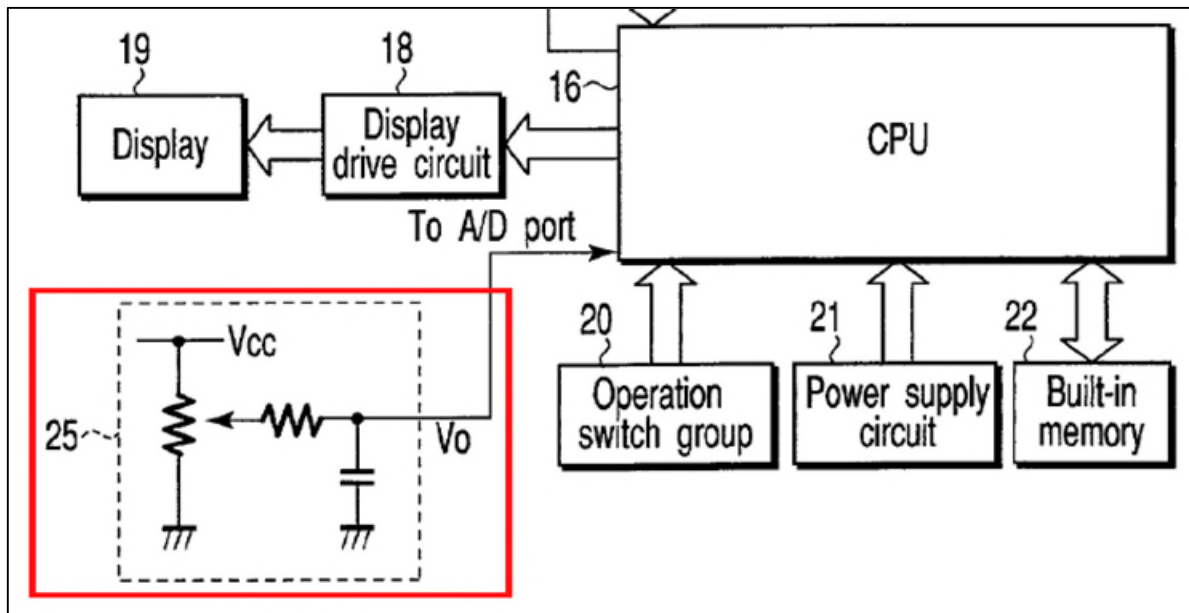
- g. **Claim 33: “The at least one audio device of claim 17 further comprising: a gain adjustment circuit, the gain adjustment circuit separate from or at least partially implemented by the control unit.”**

Strub’s audio device can be, e.g., a “video camera that includes...automatic gain control.” Ex. 1003, 19:58-63; *see also id.* 89:30-34 (audio/video acquisition device has “control settings,” including “gain”). The limitation “separate from or at least partially implemented by the control unit” has no meaning and thus does not affect the scope of the claim because, logically, if the gain adjustment circuit is not separate from the control unit, then it must be at least partially implemented by the control unit. Ex. 1002, ¶ 196. Even if that limitation is given weight, a POSA would understand that automatic gain control necessarily, and thus inherently, would be either separate from or at least be partially implemented by the device’s control unit. *Id.*

To the extent Zaxcom contends that Strub does not disclose the additional limitations of Claim 33, those limitations are taught by Nagai. Nagai's audio device has a volume-control thumbwheel 67 to control a variable resistor in circuit 25, which adjusts the "reproduction level"—and thus the gain—of sound coming from the headphone or speaker, and also adjusts the "attenuation value"—and thus the gain—for recording:



Ex. 1005, Fig. 2A (annotated)



Id. Fig. 1 (excerpted, annotated); *see id.* [0033]-[0036], [0141]-[0143] (“When the volume control 67 is turned, the resistance of the variable resistor varies, as does the output voltage V_o of the volume controller 25.”), [0261]-[0274], [0278]-[0279], [0285], [0321] (reproduction level “used in both the recorder and player modes”), Claims 11-15, Figs. 1, 2A, 3, 21. Nagai’s gain adjustment circuit 25 is separate from its control unit—CPU 16. *Id.* Fig. 1. Yet, the gain adjustment is partially implemented by the CPU in response to the user’s adjustment of the variable resistor in gain adjustment circuit 25. *Id.* [0143] (“When the volume control 67 is turned, the resistance of the variable resistor varies, as does the output voltage V_o of the volume controller 25. Since the CPU 16 recognizes volume set values of the volume control 67 on a scale of 31 stages, the reproduction level can be adjusted....”), [0262] (“[T]he CPU 16 analog-to-digital-converts an output of the volume controller 25.”), Fig. 1; *see also* Ex. 1002, ¶ 198.

- h. **Claim 34: “The at least one audio device of claim 17, wherein at least one of the local timecode is stored with said audio data.”**

The audio data in Strub and Woo is “time-stamped” (Strub) or “time tagged” (Woo) with timecodes that are stored with the audio data. *See supra* Element 17[I]; Ex. 1002, ¶ 199.

- i. **Claim 59 .**

(1) **59[Pre]: “An audio device wearable by a user for storing locally generated audio and communicating the locally generated audio to a wireless transmitter for transmission of the locally generated audio to a remote device, the remote device including at least one of a receiver and a recorder”**

Regardless of whether the preamble of Claim 59 is limiting, it is taught by Strub and Woo. *See supra* 17[Pre], 17[A].

(2) **59[A]: “the audio device comprising: a memory”**

This element is taught by Strub. *See supra* 17[C].

(3) **59[B]: “a local timecode generator operable to generate a local timecode”**

This element is taught by Strub and Woo. *See supra* 17[D].

(4) **59[C]: “an audio input port configured to couple to an audio input device to receive the locally generated audio; and”**

This element is taught by Strub, Woo, Nagai, and/or Gleissner. *See supra* 17[B].

(5) **59[D]: “a control unit coupled to the memory, the local timecode generator and the audio input port”**

This element is taught by Strub, Nagai, and/or Gleissner. *See supra* 17[E].

(6) **59[E]: “the control unit being operable to: (i) receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode”**

This element is taught by Strub and Woo. *See supra* 17[F].

(7) **59[F]: “(ii) communicate the locally generated audio to the wireless transmitter for transmission of the locally generated audio to the remote device”**

This element is taught by Strub and Woo. *See supra* 17[G].

(8) **59[G]: “(iii) store the locally generated audio in the memory as audio data; and ”**

This element is taught by Strub and Woo. *See supra* 17[H].

(9) **59[H]: “(iv) stamp at least a portion of the audio data with the local timecode.”**

This element is taught by Strub and Woo. *See supra* 17[I].

a. **Claim 60: “The audio device of claim 59, wherein at least one of the master timecode and the local timecode is an SMPTE compliant timecode.”**

This element is taught by Strub and Woo. *See supra* Claim 23.

b. **Claim 66: “The audio device of claim 59, wherein the control unit is operable to receive commands remotely from a wireless remote control unit.”**

Strub discloses persons who wear recording units. *See* Ex. 1003, 8:7-20, Fig, 1 (persons 101, 102, 103 and 104 wearing recording units 105, 106, 107, and 108,

respectively). The recording unit can be worn as a “backpack.” *Id.* 16:49-57. Each recording unit includes a “system controller” 301. *Id.* 12:4-13, Fig. 3; *see also id.* 7:44-47. Strub further discloses the use of a “control interface device” (i.e., remote control unit) to control the recording unit. *Id.* 45:51-56; Fig. 5. Strub teaches that the control interface device is remote and separate from the recording unit. *Id.* 47:25-32 (“However, it is not necessary – and may not be desirable – to mount the control interface device on the recorder.”). Therefore, the control interface device may be a handheld device placed in the pocket (*id.* 46:18-24), a brooch (*id.* 46:54-56), a watch (*id.*), or attached to a wristband (*id.* 47:2-9). Indeed, the control interface device can be mounted on an object other than the person/recorder, such as a bicycle. *Id.* 47:33-48. The control interface device transmits, and the system controller (i.e. control unit) is operable to receive, “instructions” (i.e., commands). *Id.* 45:52-65, 47:49-50. Such commands include: start/stop operation (*id.* 47:50-56), record (*id.* 47:61-63), a kill switch (*id.* 48:5-17), control of the data storage device (*id.* 49:4-14), allow/prohibit transmission of recordings to other recording units (*id.* 49:23-31), specify the amount of data compression applied (*id.* 49:37-45), marking portions of a recording (*id.* 49:46-55), and begin/terminate display of a recording (*id.* 57:25-32). *See also id.* 60:12-23, 60:63-61:4, 61:51-62:13. The command are received by the system controller 301 (control unit) of the recording unit. *Id.* 45:56-46:5. Further, Strub teaches that the control interface unit may communicate

wirelessly with the recording unit. *Id.* 47:41-47 (“When the control interface device ... is adapted for mounting on another object, it can be particularly desirable for the recording unit to be implemented to enable wireless communication ... between the control interface device ... and the remainder of the recording unit.”); *see also id.* 68:11-19, 70:38-46, Fig. 7 (control interface unit 702 for recording unit 700 can utilize “wireless” communication); Ex. 1002, ¶ 210.

B. No Relevant Secondary Considerations or Objective Indicia

Petitioner is not aware of any secondary considerations or objective indicia of nonobviousness which would impact the obviousness analysis of Ground 1. For example, Zaxcom is estopped from relying on (1) any of the evidence of objective indicia on which it relied in the Lectrosonics IPRs, or (2) any substantially similar evidence. *See supra*, § VI.D.2.

X. DISCRETIONARY DENIAL IS NOT WARRANTED

A. Section 325(d)

Institution denial based on 35 U.S.C. § 325(d) is unwarranted because the arguments and evidence presented here were not previously and/or properly considered. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential) (“*Advanced Bionics*”), *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17-18 (PTAB Dec. 15, 2017) (precedential as to §III.C.5, first paragraph).

1. **Advanced Bionics Part One**

Although Strub, Woo, Nagai and Gleissner were before the Examiner during prosecution of the '207 Patent, there is no evidence that any of them was considered meaningfully, let alone in the combination asserted in this Petition. *St. Jude Medical, LLC v. Snyders Heart Valve LLC*, IPR2018-00105, Paper 15 at 12 (PTAB May 3, 2018) (instituting where “evidence of record does not demonstrate that the Examiner considered the references in the combinations relied upon by Petitioner or addressed arguments similar to those Petitioner now presents”). Furthermore, Strub, Woo, Nagai, and Gleissner are not “substantially the same” as the prior art substantively considered by the Examiner. *Advanced Bionics*, Paper 6 at 13-19. The only references that the Examiner considered substantively were U.S. Pub. No. 2004/0237115 (“Horiuchi”), U.S. Patent 4,872,195 (“Leonard”), U.S. Pub. No. 2003/0130016 (“Matsuura”), U.S. Pub. No. 2005/0140519 (“Smith”), U.S. Pub. No. 2005/0102695 (“Musser”), and U.S. Pub. No. 2003/0130852 (“Tanaka”). Ex 1029 at 3-5, 9-14, 18-23. The Examiner never asserted, *e.g.*, that any of those references discloses synchronizing (much less jam synchronizing) a local timecode generator to a master timecode generator, or stamping audio data with a local timecode generated by a local timecode generator, as in Strub and Woo. *See id.*, *see also supra* Ground 1, Elements 17[F], 17[I]. Nor are any of those limitations present in any of Horiuchi, Leonard, Matsuura, Smith, Musser, or Tanaka.

2. **Advanced Bionics Part Two**

The only place in the prosecution history where Strub, Woo, Nagai, and Gleissner appear is in the above-referenced IDSs. *See supra* § VIII.A-D. Although the Examiner signed the IDSs and added the footnote “ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH,” *id.*, there is no evidence that Strub, Woo, Nagai, or Gleissner received meaningful consideration; none appear in an Office Action or any other substantive discussion in the prosecution file. The lack of any evidence that the Examiner meaningfully considered Strub, Woo, Nagai, or Gleissner favors institution. *Microsoft Corp. v. SurfCast, Inc.*, IPR2022-00590, Paper 9 at 15 (PTAB Oct. 7, 2022) (instituting where cited art “was not extensively evaluated during examination and was not the basis for a rejection”); *Amazon.com, Inc. v. M2M Sols. LLC*, IPR2019-01205, Paper 14 at 16 (PTAB Jan. 27, 2020) (“a reference that ‘was neither applied against the claims nor discussed by the Examiner’ does not weigh in favor of exercising the Board’s discretion under § 325(d) to deny a petition”).

Strub, Woo, Nagai, and Gleissner were considered by the PTAB in the Lectrosonics IPRs, but in those earlier proceedings the Board found claims similar to the present Challenged Claims unpatentable over those references. *See Supra* § VI.D. In contrast, the only claims **not** found unpatentable in the Lectrosonics IPRs included the limitation “replacing...[remote/remotely recorded] audio data

with...local audio data.” Ex. 1014 , 64 (Claims 1-14 unpatentable over Strub, Nagai, and Gleissner and replaced by substitute Claims 15-28); Ex. 1015, IPR Certificate, 1:30-31, 2:27-30; Ex. 1017, 73 (Claims 7, 8, 11, 12, 14, and 15 unpatentable over Strub, Nagai, Gleissner, and Woo and replaced by substitute Claims 21-26); Ex. 1030 , IPR Certificate, 1:41-43, 2:32-33; Ex. 1018 , 6 n.6, 63 (Claims 1-4, 9, 10, 12, 15, 31, 36, 37, and 41-44 unpatentable over Strub, Nagai, Gleissner, and Woo; Claim 45 (reciting storage of timecode-associated data in file header) unpatentable over those references plus Dwyer (U.S. Pat. 6,571,211); replaced by substitute Claims 50-65); Ex. 1028 IPR Certificate, 1:41-43). That limitation does not appear in any Challenged Claim in the present case.

Thus, since the USPTO’s only substantive consideration of any of the presently presented prior art resulted in unpatentability and cancelation of claims similar to the Challenged Claims, this factor weighs strongly against discretionary denial.

B. Section 314(a)

Under the Director’s Interim Procedure for Discretionary Denials (June 21, 2022) (“IP”), “the PTAB will not deny institution based on *Fintiv* if there is compelling evidence of unpatentability” (IP, 5), which this Petition provides. The *Fintiv* factors favor institution based on efficiency, fairness, and patent quality.

Apple v. Fintiv, IPR2020-00019, Paper 11 at 5 (Mar. 20, 2020) (“*Fintiv*”) (precedential).

1. **Stay Potential**

Petitioner intends to seek a stay of the district court litigation, but without “specific evidence” how the court will rule, this factor is neutral. *Sand Revolution II v. Continental Intermodal Group–Trucking*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative).

2. **Trial Timing and Diligence**

Institution approximately six months from Petition filing would result in an FWD by June 2026. The district court in the Delaware Litigation has not yet set a trial date, but the final summary judgment and Daubert briefs are not due until April 10, 2026. Ex. 1031, 3. Thus, it is extremely unlikely that trial will start in or before June 2026. Rather, there is a significant probability that the Court will not even issue its summary judgment and Daubert rulings, let alone start the trial, until June 2026 or later. Trial will not occur until substantially after the FWD.

Furthermore, Petitioner plans to seek a stay of the Delaware Litigation during the pendency of this IPR, which is likely to be granted, pushing the trial date back even further after the FWD, as the District of Delaware has historically granted requests to stay pending IPR that were filed after the institution decision. See *Ethicon LLC v. Intuitive Surgical, Inc.*, No. 17-871-LPS, 2019 WL 1276029, at *1-

3 (D. Del. Mar. 20, 2019); *Bio-Rad Labs. Inc. v. 10X Genomics, Inc.*, No. 18-1679-RGA, 2020 WL 2849989, at *1-2 (D. Del. June 2, 2020); *NEC Corp. v. Peloton Interactive, Inc.*, No. 22-987-CJB, 2024 WL 1533952, at *1–3 (D. Del. Apr. 9, 2024). Thus, Factor 2 weighs against discretionary denial. *Fintiv*, at 9.

3. **Litigation Investment**

In the Delaware Litigation, fact discovery does not end until August 2025, claim construction and expert discovery have not even begun, Ex. 1031 at 3, a trial date has not been set, *id.*, and no substantive orders have been issued related to the patents-in-suit, facts that weigh against discretionary denial. *Fintiv*, at 9-10. Thus, this factor weighs against discretionary denial.

4. **Issue Overlap**

Although all of the Challenged Claims are currently being asserted in the Delaware Litigation, that is at least partly because Zaxcom is asserting 140 claims and has refused to narrow its list of claims at this time. Ex. 1032. The Court recently issued a revised scheduling order which requires Zaxcom to reduce its asserted claims in two phases, one before the claim construction proceeding and one after the claim construction ruling. In addition, Petitioner is concurrently filing IPR Petitions on the '443 and '902 Patents. Collectively, the three related IPR Petitions challenge a total of 38 claims, which is itself too many to present to a jury, and that does not even include the other four patents-in-suit, which are not subject to the IPR Petitions

filed today. Thus, it is highly likely that many of the Challenged Claims will not be asserted in the Delaware Litigation. This weighs against discretionary denial, because “[t]he IPR trial will impact the integrity of the patent system positively by considering material issues not raised in the District Court Action.” *Seven Networks*, Paper 10 at 17, 19; *Fintiv*, at 12-13.

5. **Litigation Parties**

This Petition involves the same parties as the Delaware Litigation, so this factor may “depend[] on which tribunal was likely to address the challenged patent first,” which is the PTAB (*supra* § X.B.2). *Google v. Parus Holdings*, IPR2020-00846, Paper 9 at 20-21 (PTAB Oct. 21, 2020). In this instance, the PTAB will address the challenged patent first. When the FWD issues, the Delaware Litigation will have had no trial but will still be in its summary judgment/Daubert phase. Ex. 1031 , 3.

6. **Merits**

The “strong showing on the merits” presented here weighs against denial. *Seven Networks*, Paper 10 at 20.

XI. CONCLUSION

For the foregoing reasons, Petitioner requests institution of IPR and cancellation of all the Challenged Claims.

XII. PAYMENT OF FEES

Petitioner submits concurrently herewith the required fees under 37 C.F.R. §§ 42.15(a) and 42.103(a). The Office is authorized to charge any shortfall or other fees due during this proceeding to Deposit Account No. 50-2778.

Dated: December 4, 2024

/ Michael A. Fisher /

Jeffrey B. Plies, reg. no. 46,999

Michael A. Fisher, reg. no. 42,536

DECHERT LLP

Counsel for Petitioner

WORD COUNT CERTIFICATION

Pursuant to 37 C.F.R. § 42.24(d), I certify that this Petition contains 13,918 words (excluding the title page, table of contents, table of authorities, table of exhibits, mandatory notices, this certificate, the claim listing, and the certificate of service), as determined by Microsoft Word.

Dated: December 4, 2024

/ Michael A. Fisher /

Michael A. Fisher, Reg. No. 42,536

DECHERT LLP

Counsel for Petitioner

CHALLENGED CLAIM LISTING**Claim 17**

17 [Pre] At least one audio device wearable by a user for storing locally generated audio and transmitting the locally generated audio to a remote device, the remote device including at least one of a receiver, a recorder, a mixer, and combination thereof

17[A]: the at least one audio device comprising: a wireless transmitter

17[B]: an audio input port configured to couple to an audio input device to receive the locally generated audio

17[C]: a memory

17[D]: a local timecode generator operable to generate a local timecode

17[E]: a control unit coupled to the wireless transmitter, the audio input port, the memory, and the local timecode generator

17[F]: the control unit operable to: (i) receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode

17[G]: (ii) transmit the locally generated audio to the remote device via the wireless transmitter; and

17[H]: (iii) store the locally generated audio in the memory as audio data; and

17[I]: (iv) stamp at least a portion of the audio data with the local timecode.

Claim 18

The at least one audio device of claim 17, wherein the control unit stores the locally generated audio in the memory and transmits the locally generated audio to a remote device substantially simultaneously.

Claim 19

The method of claim 18, wherein the at least one of the group consisting of a receiver, a recorder, and combinations thereof is not worn by a creator of locally generated audio and is located remotely from the at least one local audio device.

Claim 21

The at least one audio device of claim 17, wherein the audio data includes at least one identifier selected from the group consisting of track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.

Claim 22

The at least one audio device of claim 17, wherein at least one of the group consisting of the local timecode, the master timecode, and combinations thereof includes at least one of the group consisting of time data, frame data, type, recorder transport status, name of scene, name of take, track identifier, and combinations thereof.

Claim 23

The at least one audio device of claim 17, wherein at least one of the master timecode, the local timecode, and combinations thereof is SMPTE compliant timecode.

Claim 33

The at least one audio device of claim 17 further comprising: a gain adjustment circuit, the gain adjustment circuit separate from or at least partially implemented by the control unit.

Claim 34

The at least one audio device of claim 17, wherein at least one of the local timecode is stored with said audio data.

Claim 59

59[Pre]: An audio device wearable by a user for storing locally generated audio and communicating the locally generated audio to a wireless transmitter for

transmission of the locally generated audio to a remote device, the remote device including at least one of a receiver and a recorder”

59[A]: the audio device comprising: a memory

59[B]: a local timecode generator operable to generate a local timecode

59[C]: an audio input port configured to couple to an audio input device to receive the locally generated audio; and

59[D]: a control unit coupled to the memory, the local timecode generator and the audio input port

59[E]: the control unit being operable to: (i) receive a master timecode from a master timecode generator and jam synchronize the local timecode generator to the master timecode generator using the master timecode

59[F]: (ii) communicate the locally generated audio to the wireless transmitter for transmission of the locally generated audio to the remote device”

59[G]: (iii) store the locally generated audio in the memory as audio data; and

59[H]: (iv) stamp at least a portion of the audio data with the local timecode.

Claim 60

The audio device of claim 59, wherein at least one of the master timecode and the local timecode is an SMPTE compliant timecode.

Claim 66

The audio device of claim 59, wherein the control unit is operable to receive commands remotely from a wireless remote control unit.

CERTIFICATE OF SERVICE

I certify that today in:

RØDE Microphones, LLC., et al. v. Zaxcom, Inc., IPR2025-00232 (U.S. Patent 10,276,207)

I caused to be served a copy of:

Petition
Power of Attorney
Exhibits 1001-1006, 1008, 1011-1032

upon:

ZAXCOM INC., c/o:

Rita Chipperson - rcc@chippersonlaw.com

Janice Kwon - jk@chippersonlaw.com

Morgan Golightly - mdg@chippersonlaw.com

Gerard O'Rourke - gorourke@okorlaw.com

Sean O'Kelly - sokelly@okorlaw.com

Laura Carrig - lcarrig@okorlaw.com
via:

Electronic Mail

Patent Owner agreed to have the above-listed counsel accept electronic service of the Petition on November 20, 2024. *See* 37 CFR § 42.105(b) (“Upon agreement of the parties, service may be made electronically....”).

Dated: December 4, 2024

By: /Michael A. Fisher/

Michael A. Fisher, Reg. No. 42,536

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Exhibit G

UNITED STATES
PATENT AND TRADEMARK OFFICE



PTAB Trial Statistics FY24 End of Year Outcome Roundup IPR, PGR

Patent Trial and Appeal Board
Fiscal Year 2024

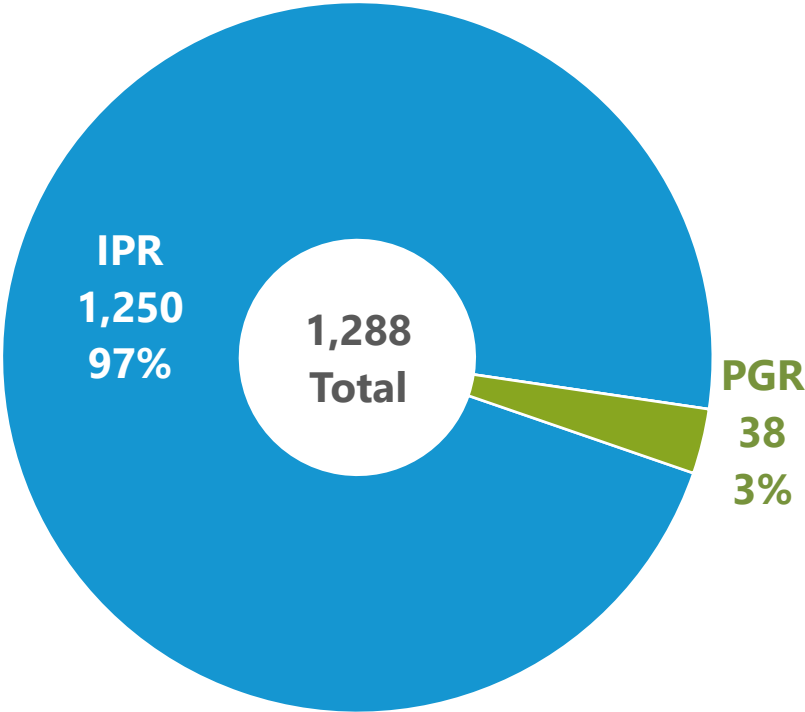


UNITED STATES
PATENT AND TRADEMARK OFFICE ®

Zaxcom, Inc. Exhibit 2029
RØDE Microphones, LLC, et. al v. Zaxcom, Inc.
Page 503 of 644

Petitions filed by trial type

(FY24: Oct. 1, 2023 to Sept. 30, 2024)

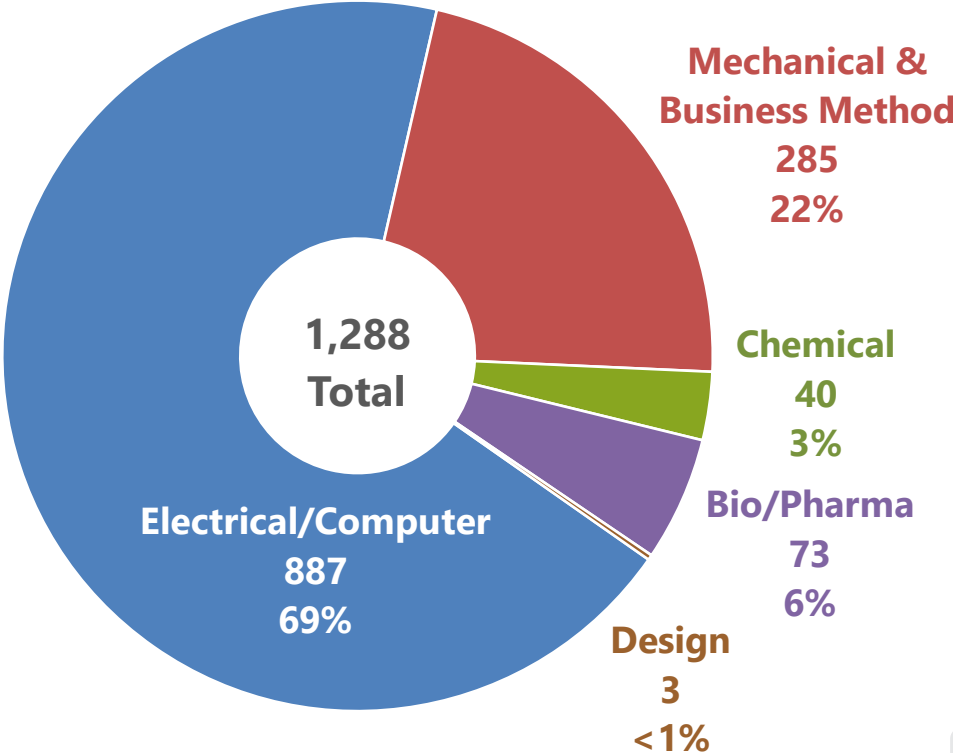


Trial types include Inter Partes Review (IPR) and Post Grant Review (PGR).



Petitions filed by technology

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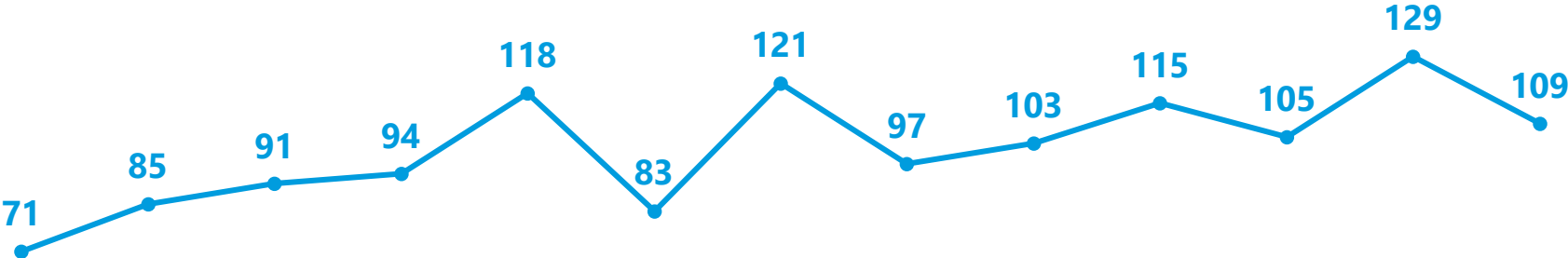


Petitions filed by month

(September 2024 and Prior 12 Months: Sept. 1, 2023 to Sept. 30, 2024)

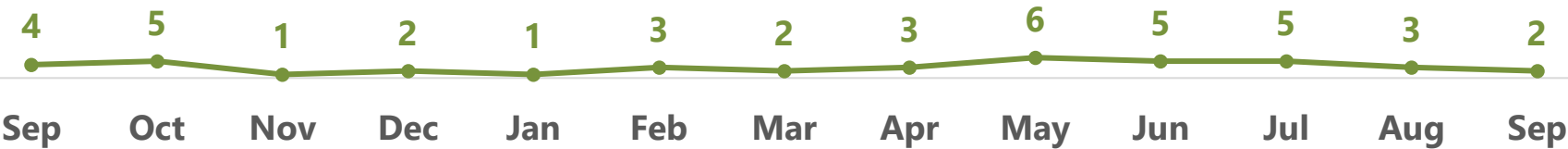
IPR

(1,250 IPRs in FY24)



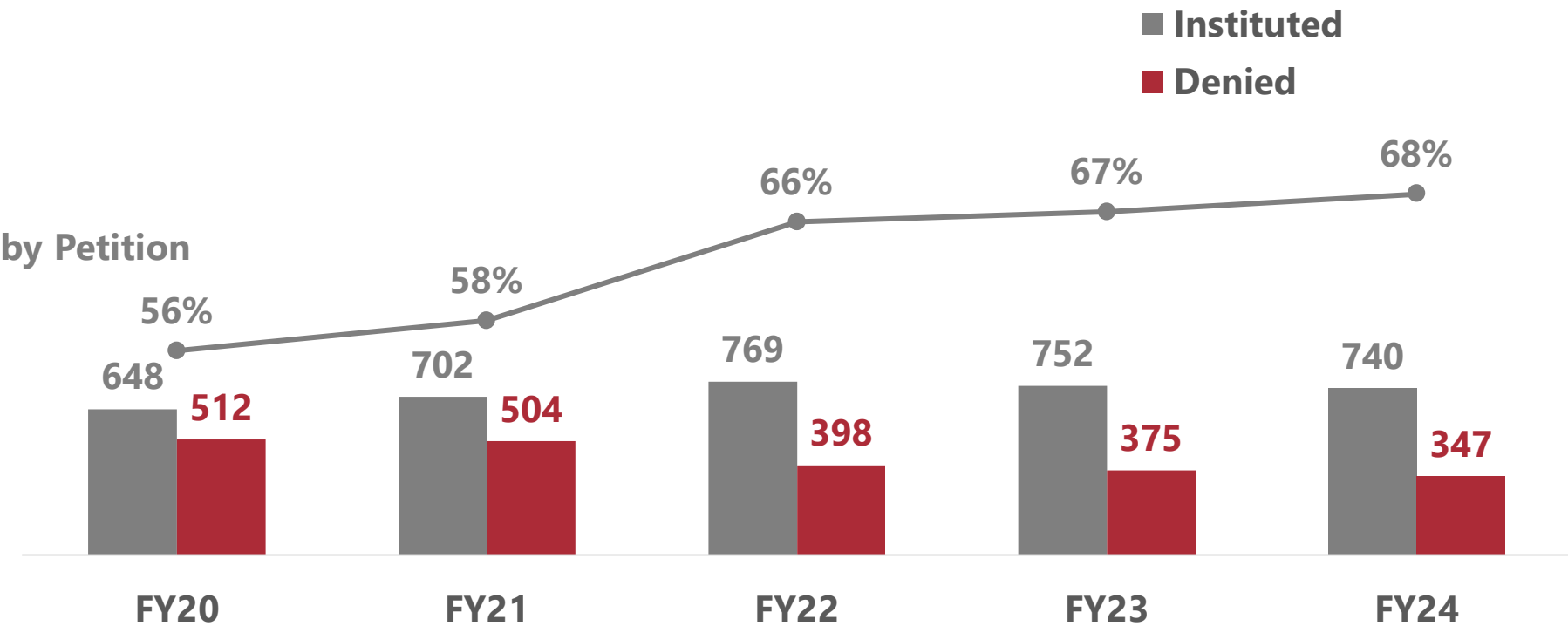
PGR

(38 PGRs in FY24)



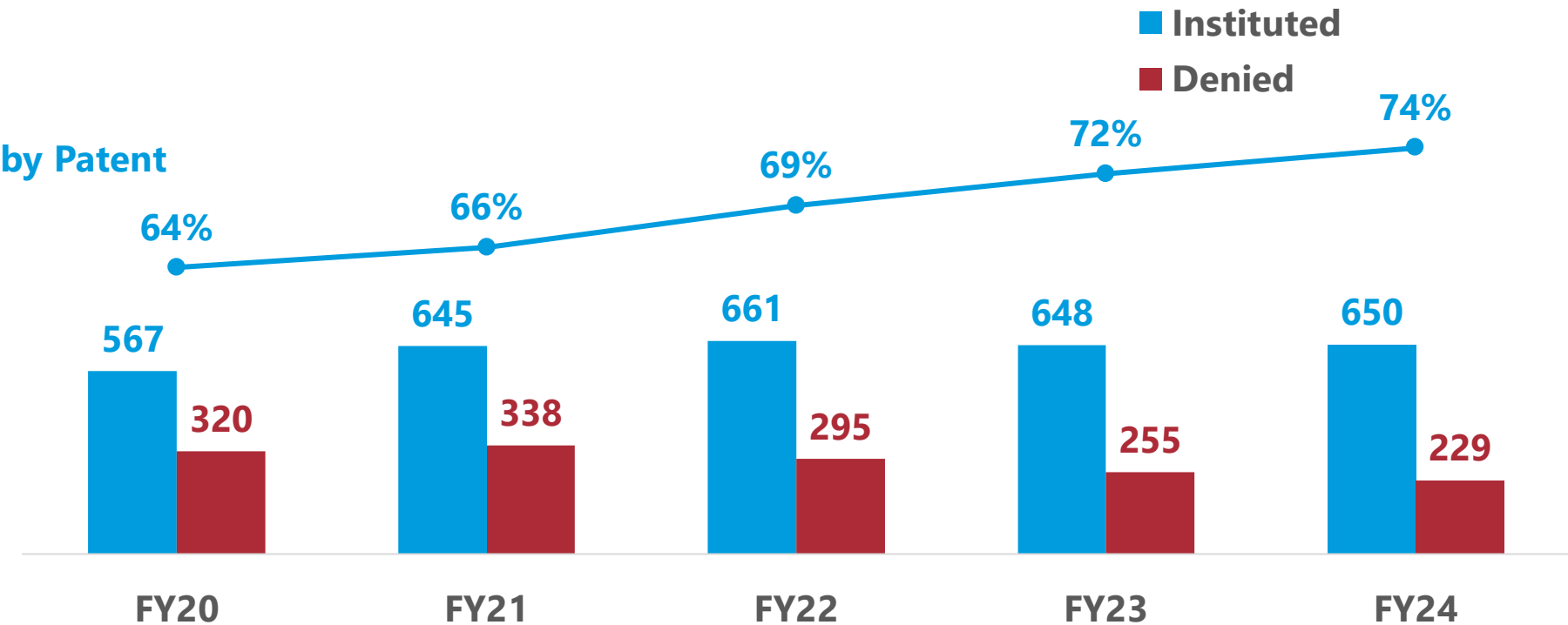
Institution rates by petition

(FY20 to FY24: Oct. 1, 2019 to Sept. 30, 2024)



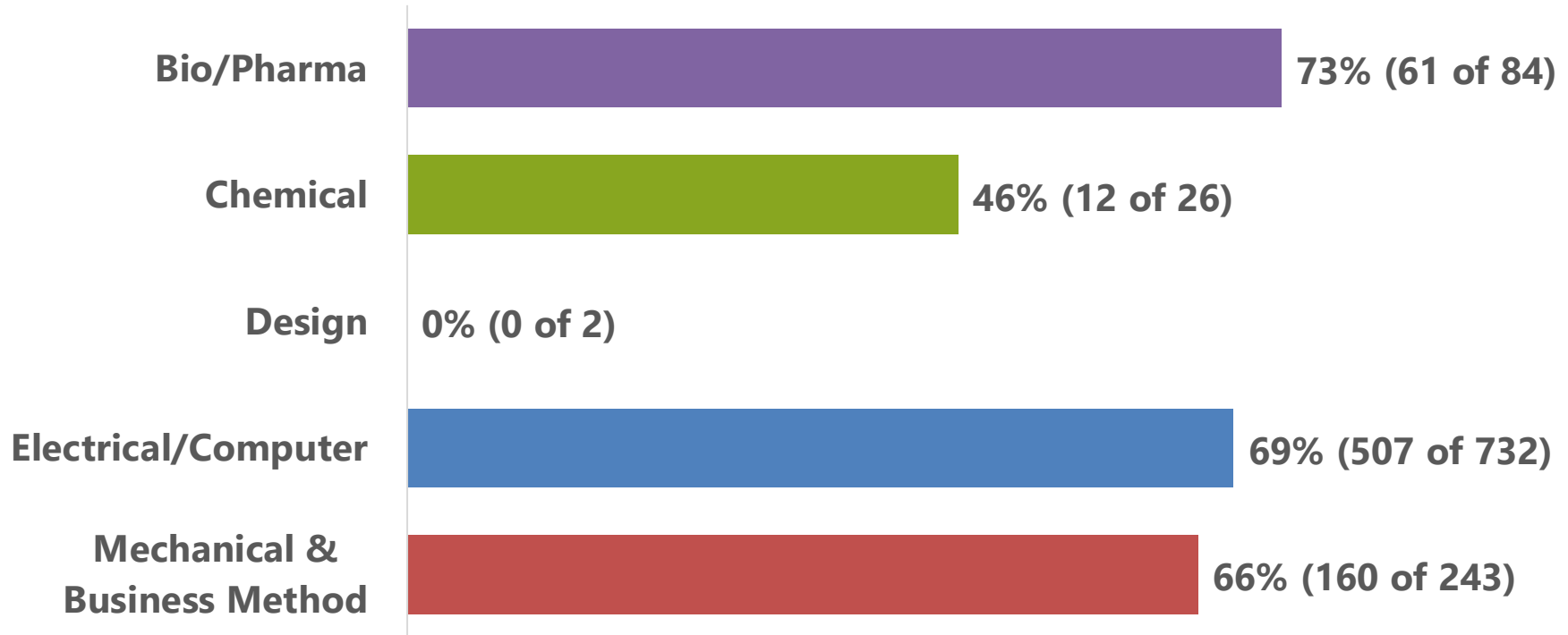
Institution rates by patent

(FY20 to FY24: Oct. 1, 2019 to Sept. 30, 2024)



Institution rates by technology

(FY24: Oct. 1, 2023 to Sept. 30, 2024)

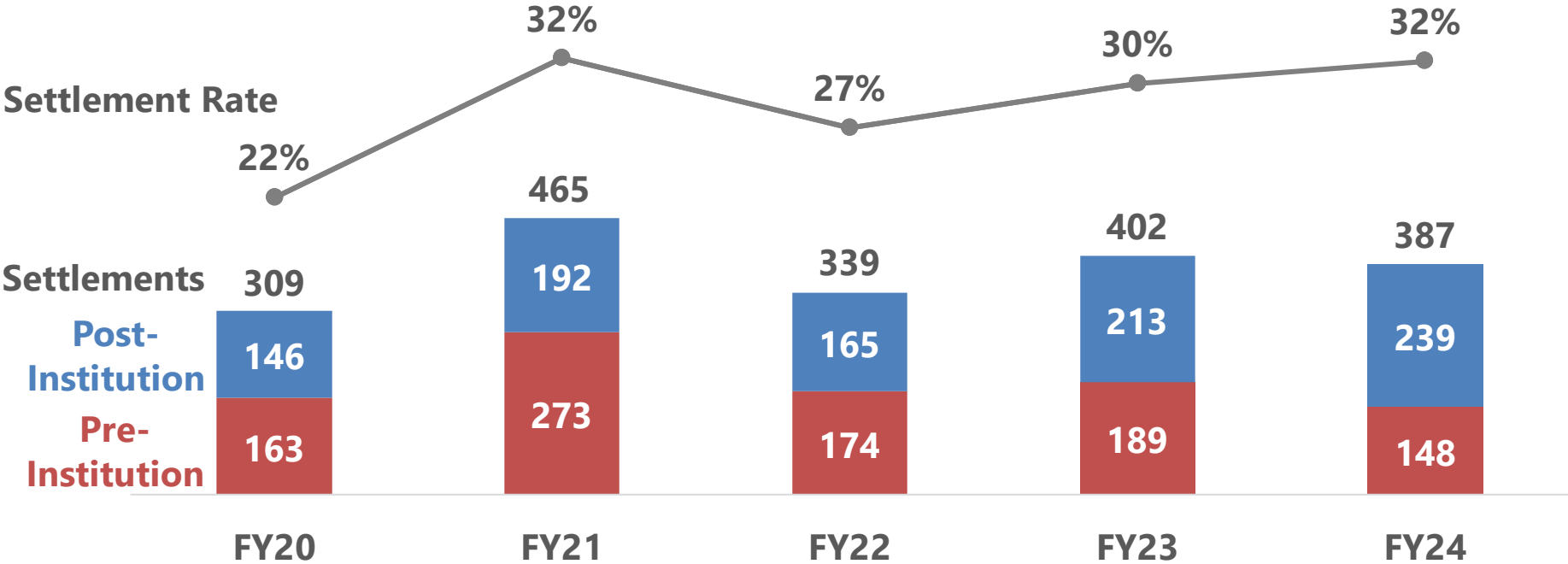


Institution rate for each technology is calculated by dividing petitions instituted by decisions on institution (i.e., petitions instituted plus petitions denied). The outcomes of decisions on institution responsive to requests for rehearing are excluded.



Settlements

(FY20 to FY24: Oct. 1, 2019 to Sept. 30, 2024)

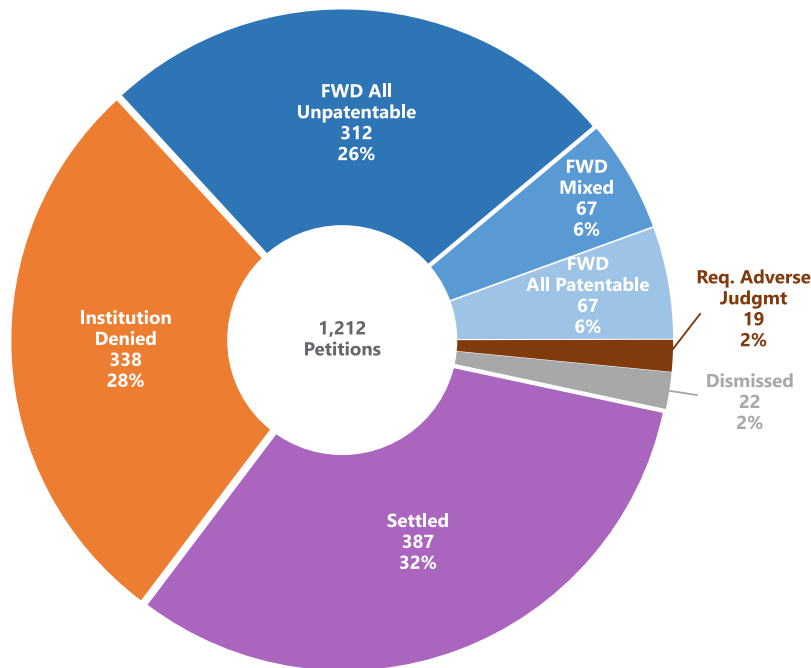


Settlement rate is calculated by dividing total settlements by concluded proceedings in each fiscal year (i.e., denied institution, settled, dismissed, requested adverse judgment, and final written decision), excluding joined cases.



Outcomes by petition

(FY24: Oct. 1, 2023 to Sept. 30, 2024)

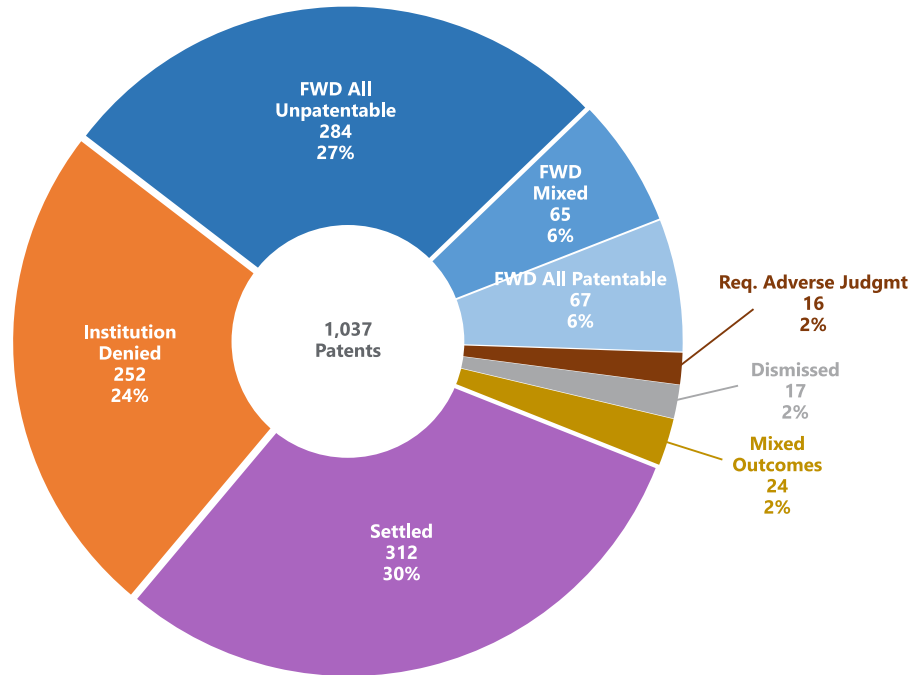


FWD patentability or unpatentability reported with respect to the claims at issue in the FWD. Joined cases are excluded.



Outcomes by patent

(FY24: Oct. 1, 2023 to Sept. 30, 2024)

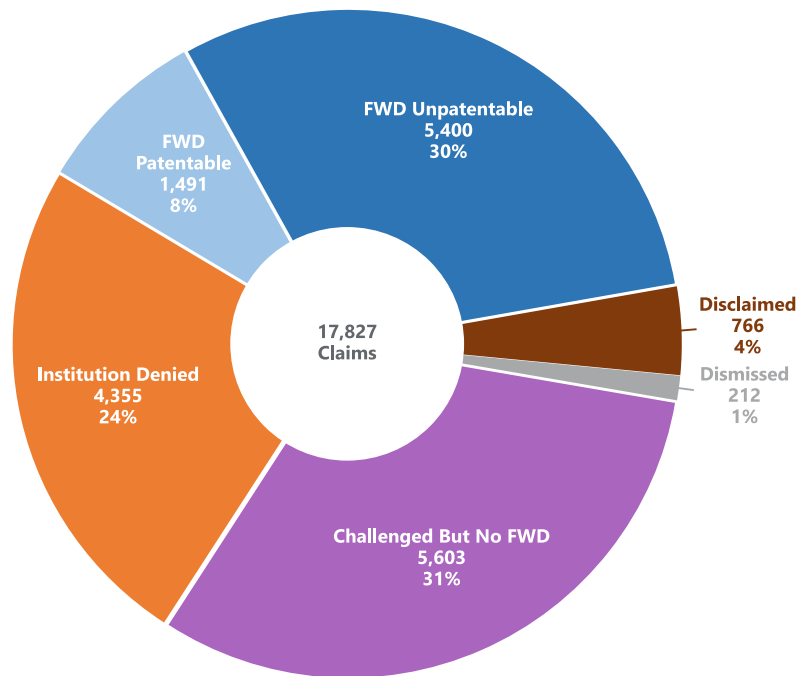


FWD patentability or unpatentability reported with respect to the claims at issue in the FWD. "Mixed Outcome" is shown for patents receiving more than one type of outcome from the list of: denied, settled, dismissed, and/or req. adverse judgement only. A patent is listed in a FWD category if it ever received a FWD, regardless of other outcomes.



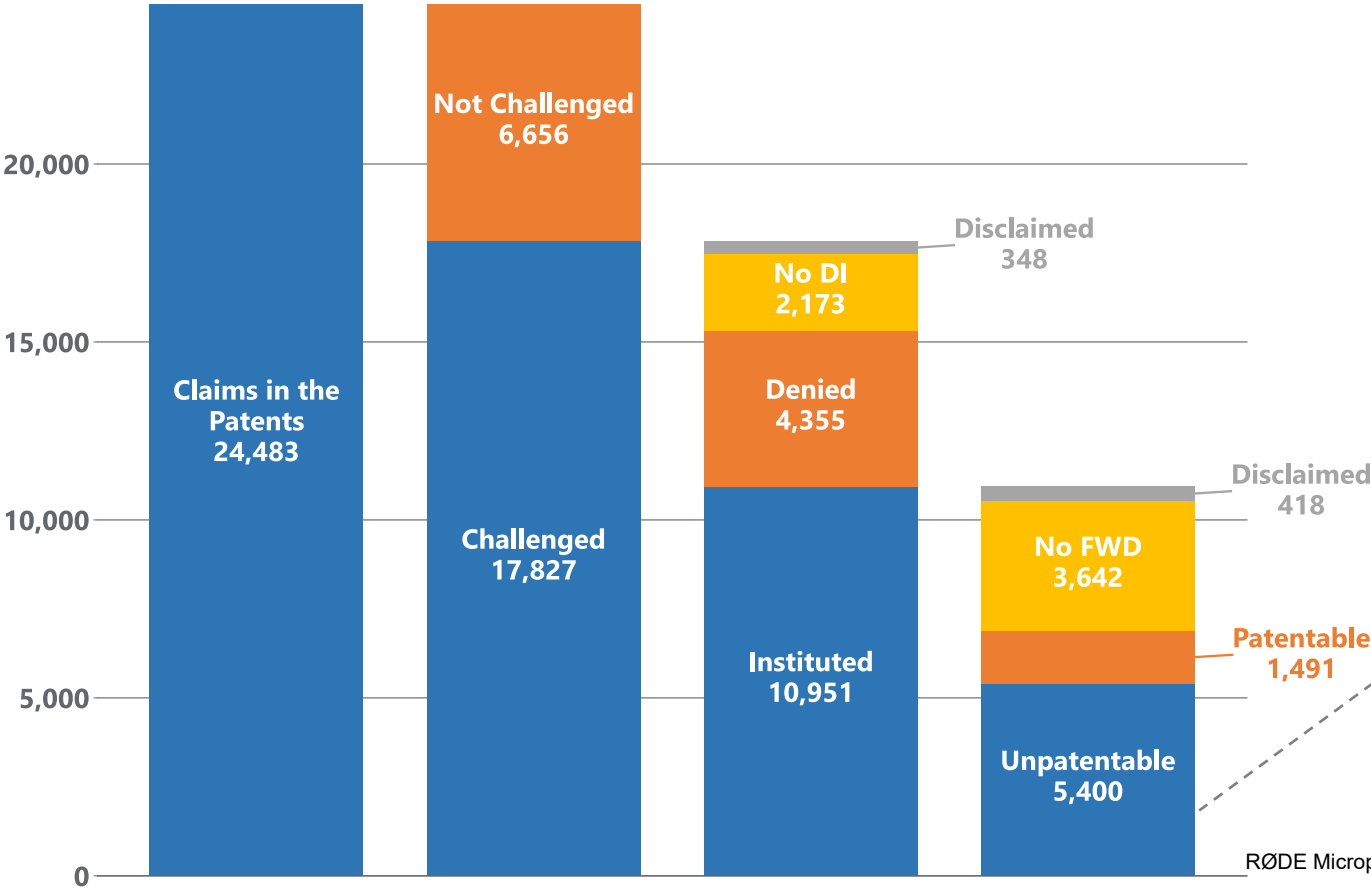
Outcomes by claim challenged

(FY24: Oct. 1, 2023 to Sept. 30, 2024)



Claim outcomes

(FY24: Oct. 1, 2023 to Sept. 30, 2024)



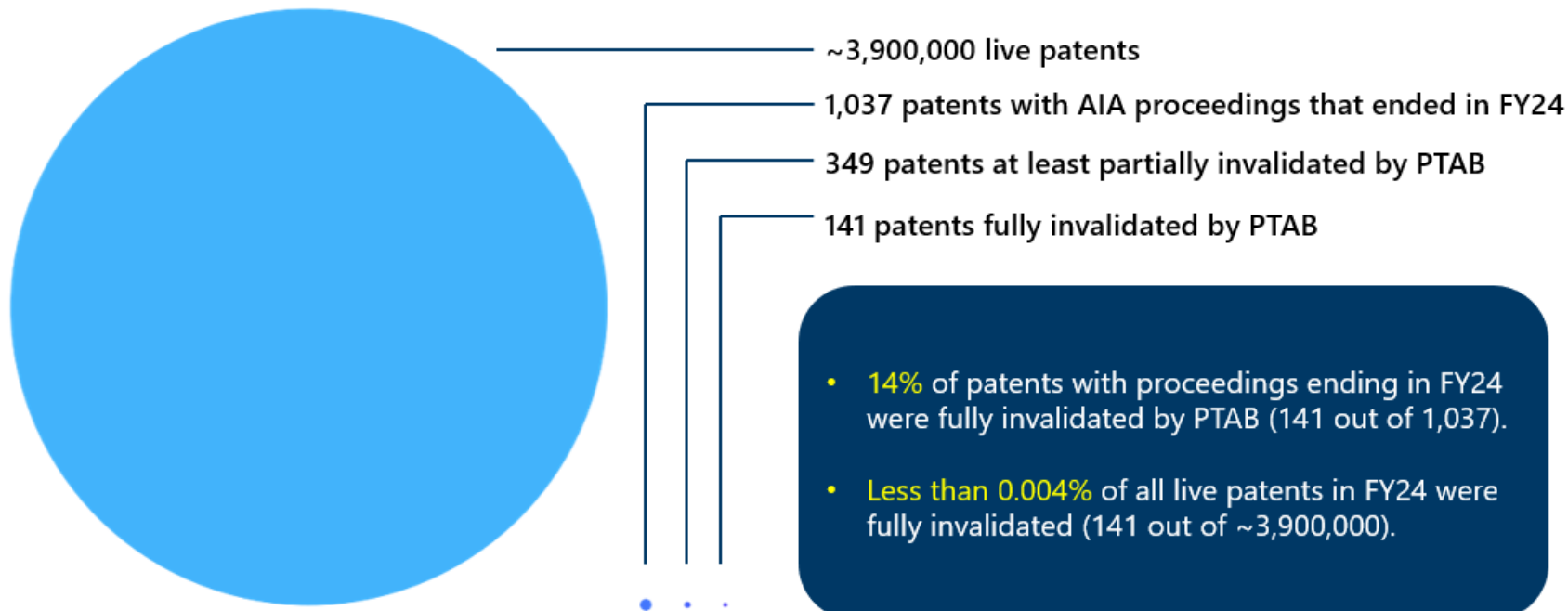
“No DI” and “No FWD” mean the claim was challenged but not addressed in a DI/FWD, e.g., due to settlement.

30% of challenged claims and 49% of instituted claims were found unpatentable by a preponderance of the evidence.



All patents: Fiscal Year 2024

(FY24: Oct. 1, 2023 to Sept. 30, 2024)



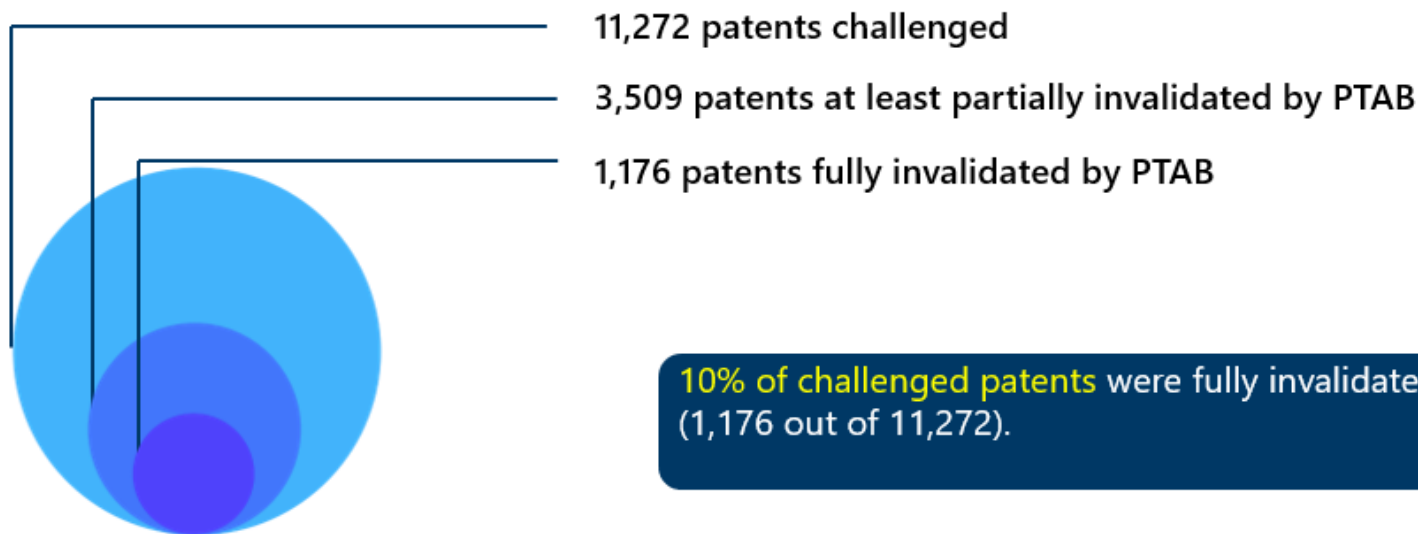
Events that end an AIA proceeding include final written decisions (FWD), settlements, dismissals, requests for adverse judgment, and denials of institution. A patent is listed in an FWD category if it ever received an FWD.

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Zaxcom, Inc. Exhibit 2029
RØDE Microphones, LLC, et. al v. Zaxcom, Inc.
Page 515 of 644

All patents: All time

(All time: Sept. 16, 2012 to Sept. 30, 2024)



10% of challenged patents were fully invalidated by PTAB (1,176 out of 11,272).

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Exhibit H

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RØDE MICROPHONES, LLC AND
FREEDMAN ELECTRONICS PTY LTD,
Petitioners

v.

ZAXCOM, INC.,
Patent Owner.

IPR2025-00557

Patent 12,051,444

PETITION FOR INTER PARTES REVIEW

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TABLE OF EXHIBITS

Exhibit No.	Description
1001	United States Patent No. 12,051,444
1002	Declaration of Professor Chris Kyriakakis
1003	United States Patent No. 6,825,875 (“Strub”)
1004	United States Patent No. 5,479,351 (“Woo”)
1005	United States Publication No. 2002/0159179 (“Nagai”)
1006	United States Patent Publication No. 2004/0028241 (“Gleissner”)
1007	U.S. Patent Pub. No. 2004/0267387 (“Samadani”)
1008	[Reserved]
1009	[Reserved]
1010	[Reserved]
1011	April 12, 2024 Email Serving Complaint to Freedman Electronics Pty Ltd.
1012	[Reserved]
1013	[Reserved]
1014	IPR2018-00972 Paper 41 November 7, 2019 Final Written Decision
1015	United States Patent 9,336,307
1016	IPR2018-00972 Petition for Inter Partes Review

Exhibit No.	Description
1017	IPR2018-01129 Paper 33 January 24, 2020 Final Written Decision
1018	IPR2018-01130 Paper 32 January 24, 2020 Final Written Decision
1019	IPR2018-00972 Zaxcom, Inc's Patent Owner Response
1020	IPR2018-01129 Zaxcom, Inc's Patent Owner Response
1021	IPR2018-01130 Zaxcom, Inc's Patent Owner Response
1022	IDS Form from United States Patent No. 10,276,207 File History (filed March 11, 2019)
1023	United States Patent No 489,570
1024	Apple Be Damned: The Humble Headphone Jack Has Survived For More Than A Century by Jonathan Ore. Published September 10, 2016.
1025	IEC Standard 61076-2-103:2004
1026	Wayback Machine Archived Copy of Sanken Catalogue
1027	Wayback Machine archived copy of Sanken Webpage
1028	United States Patent 8,385,814
1029	[Reserved]
1030	United States Patent 7,929,902
1031	November 13, 2024 Doc. 98 Order Revising Schedule in <i>Zaxcom, Inc. v. Rode Microphones, LLC and Freedman Electronics PTY Ltd.</i>
1032	[Reserved]
1033	[Reserved]
1034	[Reserved]

Exhibit No.	Description
1035	[Reserved]
1036	[Reserved]
1037	Ratcliff, TIMECODE, A User's Guide (2015)
1038	U.S. Patent No. 12,051,444 Pros. History, July 11, 2023 Office Action
1039	SMPTE Standard, SMPTE 12M-1999
1040	U.S. Patent No. 7,148,844

MANDATORY NOTICES UNDER 37 C.F.R. §42.8

Pursuant to 37 C.F.R. §42.8, Petitioner states as follows:

A. Real Parties-in-Interest (37 C.F.R. §42.8(b)(1))

The real parties-in-interest are RØDE Microphones, LLC and Freedman Electronics Pty Ltd.

B. Related Matters (37 C.F.R. §42.8(b)(2))**1. U.S. District Court for the District of Delaware**

The following pending district court litigation may affect or be affected by this proceeding: *Zaxcom, Inc. v. RODE Microphones, LLC, et al.*, No. 1:23-cv-01245-JFM (D. Del.), filed October 31, 2023 (the “Delaware Litigation”). Petitioner RØDE Microphones, LLC was served with the original Complaint on December 4, 2023. Petitioner Freedman Electronics Pty Ltd was served with the original Complaint on April 12, 2004. See Exhibit 1011. On November 14, 2024, Zaxcom filed an Amended Complaint which alleges, among other things, that Petitioner has infringed certain claims of U.S. Patent 12,051,444 (the “’444 Patent”) and six other patents: U.S. Patent Nos. 7,711,443 (the “’443 Patent”), 7,929,902 (the “’902 Patent”), 8,385,814 (the “’814 Patent”), 9,336,307 (the “’307 Patent”), 10,276,207 (the “’207 Patent”), and 11,610,605 (the “’605 Patent”) (collectively, the “Delaware Patents-in-Suit”). The Delaware Patents-in-Suit are all related to each other through a chain of continuation and continuation-in-part applications.

2. Patent Trial and Appeal Board—Co-Pending Matters

The following pending IPRs may affect or be affected by this proceeding:

- *RØDE Microphones, LLC, et al. v. Zaxcom, Inc.*, IPR2025-00230 (“the ’230 IPR”), which involves the ’443 Patent;
- *RØDE Microphones, LLC, et al. v. Zaxcom, Inc.*, IPR2025-00231 (“the ’231 IPR”), which involves the ’902 Patent;
- *RØDE Microphones, LLC, et al. v. Zaxcom, Inc.*, IPR2025-00232 (“the ’232 IPR”), which involves the ’207 Patent;

(collectively, the “Co-Pending RØDE IPRs”).

Since the presently challenged claims of the ’444 Patent share many elements with the claims of the related ’443, ’902, and ’207 Patents that are being challenged in the Co-Pending RØDE IPRs, since the prior-art references relied on in this Petition were also relied on in the Co-Pending RØDE IPRs, and since all four of the ’443, ’902, ’207, and ’444 Patents are involved in the Delaware Litigation, decisions in the Co-Pending RØDE IPRs may affect and/or be affected by decisions in this proceeding.

3. Patent Trial and Appeal Board—Past Matters

The related ’902, ’814, and ’307 Patents were previously involved in the following IPRs filed by third-party Lectrosonics:

- '902 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129 (“the '1129 IPR”);
- '814 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01130 (“the '1130 IPR”); and
- '307 Patent: *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-00972 (“the '972 IPR”)

(collectively, “the Lectrosonics IPRs”).

Since the challenged claims of the '444 Patent are similar to claims that the PTAB previously found unpatentable in the Lectrosonics IPRs, and since the Lectrosonics IPRs involved several of the same prior-art references relied on here, the Lectrosonics IPRs may affect the decision in this proceeding.

C. Lead and Backup Counsel and Service Information (37 C.F.R. §§42.8(b)(3) and (b)(4))

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I. INTRODUCTION

RØDE Microphones, LLC and Freedman Electronics Pty Ltd (collectively “Petitioner”) requests IPR and cancellation of Claims 1-7, 9, 10, 12-20, 22-24, 26, and 27 (the “Challenged Claims”) of the ’444 Patent (Ex. 1001). IPR of the Challenged Claims should be instituted and the claims found unpatentable.

II. CERTIFICATION OF GROUNDS FOR STANDING UNDER 37 C.F.R. § 42.104(a)

Petitioner certifies that the ’444 Patent is available for IPR and Petitioner is not barred or estopped from requesting IPR of the Challenged Claims.

III. IDENTIFICATION OF RELIEF REQUESTED AND GROUNDS FOR CHALLENGE UNDER 37 C.F.R. §§ 42.22(a)(1) AND 42.104(b)

Petitioner requests review and cancellation of the Challenged Claims on the following grounds:

Ground	Claims	Basis	Prior Art
1	1-7, 9-10, 13-15, 17-20, 22-23, 27	35 U.S.C. § 103	U.S. Patent 6,825,875 (“Strub”) (Ex. 1003) and U.S. Patent 5,479,351 (“Woo”) (Ex. 1004)
2	12, 26	35 U.S.C. § 103	Strub, Woo, U.S. Patent Pub. 2002/0159179 (“Nagai”) (Ex. 1005), and U.S. Patent Pub. 2004/0028241 (“Gleissner”) (Ex. 1006)

3	16, 24	35 U.S.C. § 103	Strub, Woo, and U.S. Patent Pub. 2004/0267387 (“Samadani”) (Ex. 1007)
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For purposes of the Delaware Litigation, Petitioner reserves the right to argue that one or more terms in the claims of the ’444 Patent are indefinite or require construction. Furthermore, Petitioner’s application of the respective claim terms is based on Zaxcom’s application of the claims against the products accused in its infringement contentions in the Delaware Litigation, as the claims must be applied in the same manner.

IV. BACKGROUND OF THE TECHNOLOGY

The ’444 Patent describes a system that includes a wearable local device for recording locally generated audio and transmitting the audio to a remote device. Ex. 1001, 1:40-2:5. The local device receives a master timecode from a master timecode generator, stamps local audio data with a timestamp to create time-referenced local audio data, and stores/records the time-referenced local audio data in local memory. *Id.* 3:62-66, 4:48-5:6, 10:41-65, 43:22-56.

This purported innovation was not new, but existed in the prior art. As non-limiting examples, Strub, Woo, and Samadani each teach local devices which record locally generated audio, transmit the audio to a remote device, receive a master timecode from a master timecode generator, and stamp the recorded audio data with

a timestamp referencing at least a portion of the local audio data to the master timecode. *See, e.g.*, Ex. 1003, 8:10-29, 8:50-53, 11:32-50, 12:13-21, 12:31-43 (transmitting recorded local audio data to remote devices), 25:35-49, 37:18-40, 38:1-4, 38:29-39 (“synchronization pulse” received from “‘master’ recording unit”), 62:26-63:49 (using a GPS time to “generate time-stamps for the recording data.”), Figs. 1-3; Ex. 1004, Abstract, 1:60-2:9, 2:39-48, 3:3-24, 4:3-32, 5:3-5 (recorders capture performance), 5:37-49 (recordings communicated to editing station), 5:5-67 (recording “date and time tag[]” with master timecodes), 7:26-50, 8:32-44, 8:60-9:4, 9:40-43, 9:56-63, 10:15-64, Figs. 1, 3-6; Ex. 1007, [0036]-[0038] (audio recorded in local recorder and transmitted to central processing station 303; “reference signal generator [generates] a time stamp”), [0042], [0044]-[0047], [0048] (“[R]eference signal receiver 525a...receives a main reference signal and generates a reference signal that is stored as reference data....”), Claims 9, 10, 15, 19, 32, Figs. 3, 5; Ex. 1002, ¶ 37.

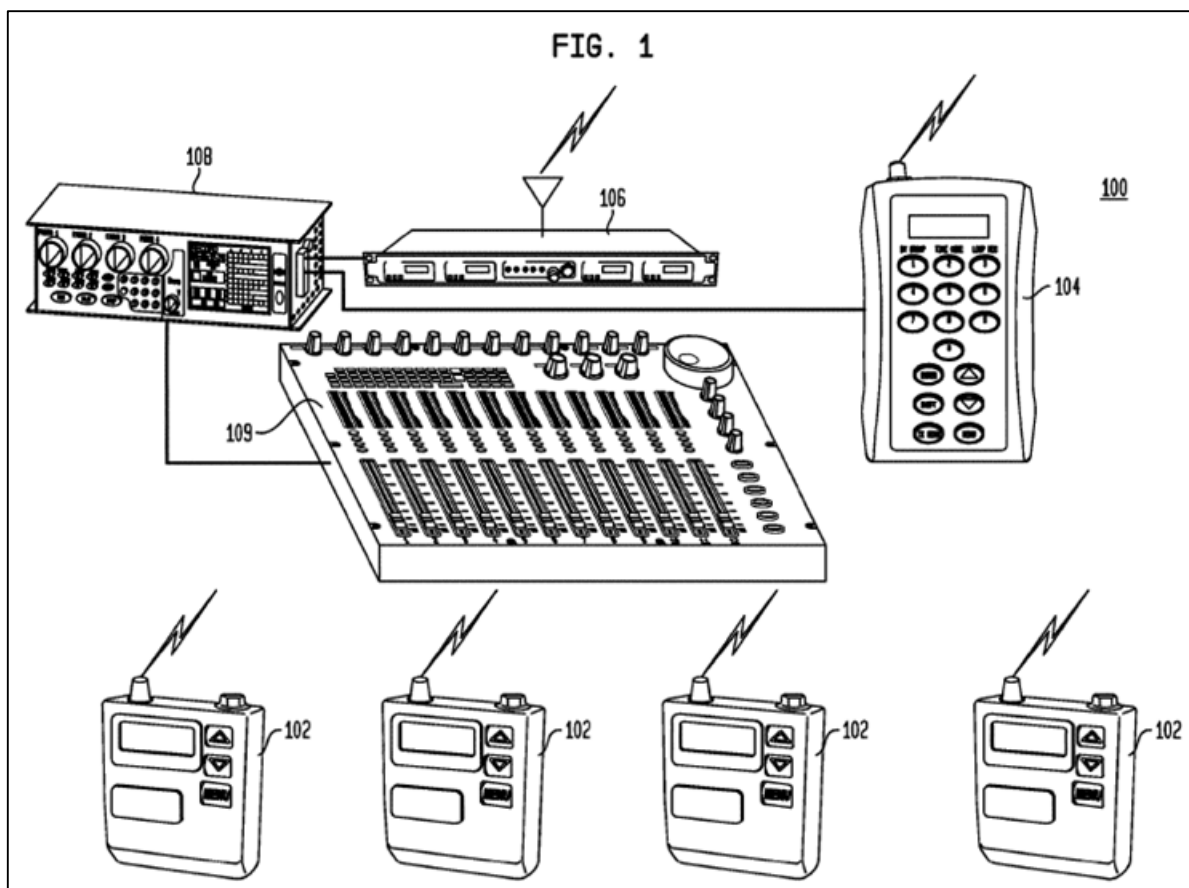
V. PERSON OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSA”) as of the claimed priority date would have had at least a Bachelor’s degree in electrical engineering or a related or equivalent field, and two or more years of experience working with audio systems. However, additional years of education in the above-referenced fields may compensate for fewer years of experience. Ex. 1002, ¶ 38.

VI. THE '444 PATENT

A. Summary of the Specification

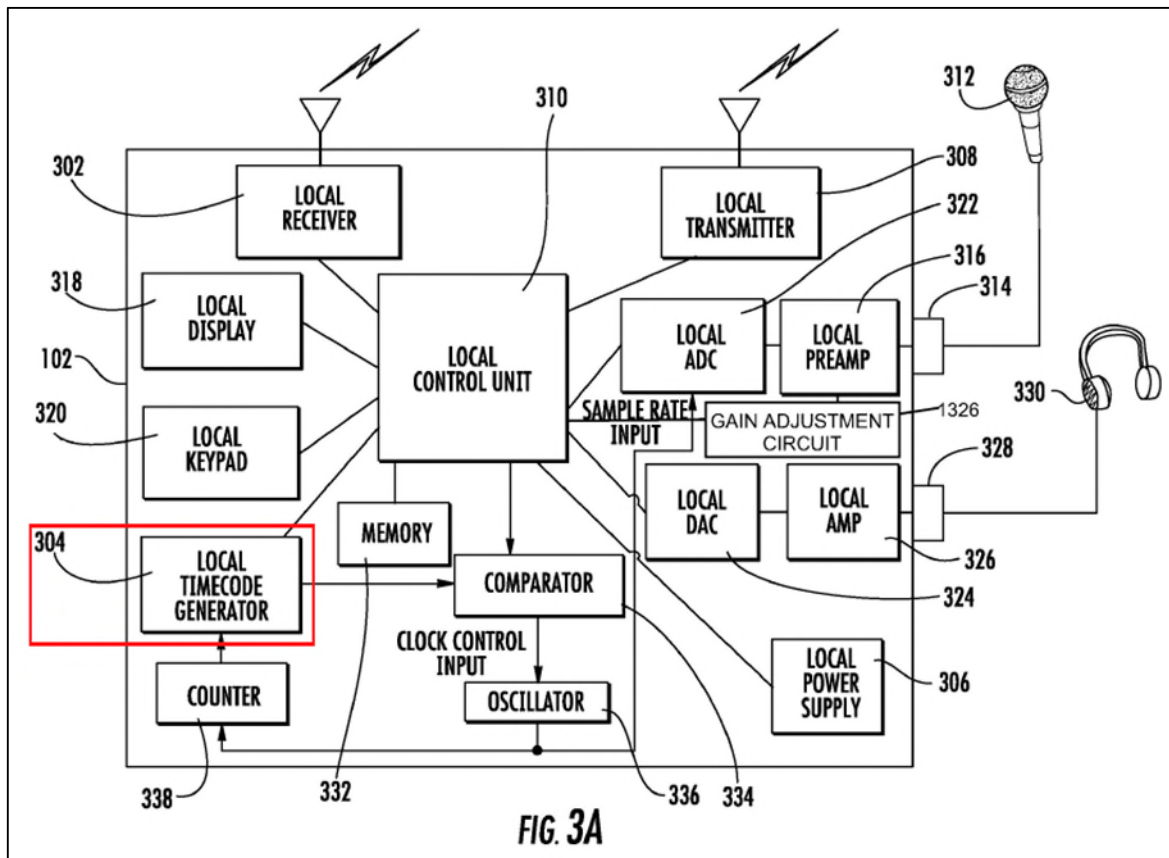
The '444 Patent describes a recording system 100 which wirelessly records audio performances. Ex. 1001, 3:64-66, Fig. 1. The system 100 includes wearable, local audio devices 102, a remote receiver 106, a remote recorder 108 connected to the receiver 106, a mixer 109, and a remote control unit 104 capable of transmitting a time reference signal, digital commands, and/or audio to the other components, as depicted in Fig. 1:



See id. 4:23-29, 30:7-25, 43:22-32, 43:65-67, 44:12-13, Fig. 3B. The local audio devices 102 record audio from the performers and transmit audio wirelessly to the remote receiver 106, *id.* 4:36-42, where it is also recorded by recorder 108. *Id.* 4:36-38.

The components of the system are synchronized to allow each component to timestamp its recorded audio. *Id.* 3:62-4:8. The timestamps allow the system to combine individual audio tracks into multi-track audio files, correct for lost audio data, and/or synchronize tracks in post-processing. *Id.* 4:8-22, 4:48-5:6.

To synchronize its devices, the system can include a master timecode generator to generate master timecodes and send them wirelessly to the local audio devices 102. *Id.* 11:23-40, 17:9-11, Fig. 6 (step 604). Each local audio device 102 can also have its own local timecode generator 304, as illustrated in Fig. 3A:



See *id.* 8:61-63.

The local audio devices 102 can use the master timecodes to timestamp the locally recorded audio. *Id.* 4:48-5:6, 5:65-6:4, 10:53-58; *see also* Ex. 1002, ¶ 48.

B. Claims

The '444 Patent has 29 claims, of which Claims 1-7, 9-10, 12-20, 22-24, 26, and 27 are challenged in this Petition. Claims 1 and 13 are independent. Each Challenged Claim refers to a wearable local audio device which receives a master timecode, creates time-referenced local audio data from locally generated audio and the master timecode or a local timecode, and stores the time-referenced local audio

data in a local memory, wherein the audio data is transmitted to a remote receiver substantially simultaneously with the receiving of local audio data or creating or the storing of the time-referenced local audio data. *See* Ex. 1001, Claims 1, 13. The '444 Patent admits that all or most of these features—which are described in the patent's **“Background”** section—were known in the prior art.¹ *Id.* 1:40-42 (**“recording...audio received from...wireless devices”**), 1:54-56 (“In many...systems...audio is **timestamped with a time reference signal....**”), 1:63-2:5 (audio recorder/receiver **“receive audio wirelessly from one or more wireless transmitters**[, which are] **body packs that are worn by each performer....**”).²

The challenged dependent claims similarly add features that are admitted to be prior art:

Claim(s)	Feature	Location in '444 Background
2, 14	“wherein the local audio device is in the form of a body pack”	1:65-2:5 (“[W]ireless transmitters may take the form of body packs

¹ *See Nichia Corp. v. Emcore Corp.*, Case IPR2012-00005, Paper 68 at 20 (P.T.A.B. Feb. 11, 2014) (“The Admitted Prior Art includes the background section...of the...patent....”); *In re Metz*, 173 F.3d 433, at *1 (Fed. Cir. 1998); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1303 (Fed. Cir. 2016); *In re Battiston*, 139 Fed.Appx. 281, 282 (Fed. Cir. 2005).

² Emphasis added throughout unless otherwise indicated.

		that are worn by each performer....”)
4, 17	“wherein the at least one master timecode [and the at least one local timecode] include[s] hour data, minute data, second data, SMPTE timecode, or combinations thereof”	1:54-59 (“In many such systems, the received audio and/or the multitrack audio is timestamped with a time reference signal such as a...SMPTE...timecode signal containing information regarding the hour, minute, second,...”)
5, 18	“wherein the remote receiver is configured to communicate with a recording device”	1:63-2:5 (“audio recorder and.... receiver...receive audio wirelessly from one or more wireless transmitters....”)
6, 19	“wherein the recording device is a multi-track recorder, a personal computer, a cellular phone, or a camera”	1:63 (“[S]uch systems include a multi-track audio recorder....”); 1:48-54 (“multi-track audio recorder”)
9, 22	“wherein the time-referenced local audio data is configured to facilitate synchronization of the time-referenced local audio data and the remotely recorded audio data”	1:52-62 (“The multi-track recorder combines the single track of audio received from each microphone to create one multi-track audio file. ...[T]he received audio...is timestamped with a...SMPTE... timecode signal [which] allows audio to be more easily matched”)
25	“create time-referenced remote audio data from the audio data received from the local audio device”	<i>Id.</i> at 1:52-62
25	“store the time-referenced remote audio data in the at least one remote memory.”	<i>Id.</i> at 1:52-62; 1:41-42 (“recording ...audio received from one or more wireless devices”), 1:63-2:5 (“The audio recorder then combines the wireless transmissions received from all body packs to create one multi-track audio file.”)

12, 26	“at least one audio input configured to receive the local audio data”	1:48-52 (“Some such systems include a multitrack audio recorder wired to one or more microphones.”; “[Audio] recorded by one or more microphones that are directly wired to the multi-track recorder.”)
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C. Lectrosonics IPRs

1. Collateral Estoppel Based on the PTAB’s Previous Findings

In the Lectrosonics IPRs, the PTAB made numerous findings regarding the disclosure of claim elements by Strub, Woo, Nagai, and Gleissner and the obviousness of combining them. Zaxcom is collaterally estopped from disputing these findings.

Collateral estoppel, a/k/a issue preclusion, precludes a party from relitigating an issue if: “(1) the issue is identical to one decided in the first action; (2) the issue was actually litigated in the first action; (3) resolution of the issue was essential to a final judgment in the first action; and (4) [the party against whom collateral estoppel is being asserted] had a full and fair opportunity to litigate the issue in the first action.” *Google LLC v. Hammond Dev. Int’l, Inc.*, 54 F.4th 1377, 1381 (Fed. Cir. 2022) (citing *In re Freeman*, 30 F.3d 1459, 1465 (Fed. Cir. 1994)). “It is well established that collateral estoppel applies to IPR proceedings.” *Id.* (citing *Papst Licensing GMBH & Co. KG v. Samsung Elecs., Am., Inc.*, 924 F.3d 1243, 1251 (Fed.

Cir. 2019)). Furthermore, “[i]t is well established that patent claims need not be identical for collateral estoppel to apply [provided] that the *issues of patentability* [are] identical....[C]ollateral estoppel may apply even if the patent claims ‘use slightly different language to describe substantially the same invention,’ so long as ‘the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity.’” *Id.*; *see also Google LLC v. Parus Holdings, Inc.*, IPR2022-00279, Paper 16 at 17-21 (P.T.A.B. Sept. 18, 2023) (collateral estoppel where non-identical claim limitations were sufficiently similar that the *issues* were identical); *Papst*, 924 F.3d at 1250-53 (Fed. Cir. 2019) (issue preclusion based on prior PTAB decision); *see also United States v. Utah Constr. & Mining Co.*, 384 U.S. 394, 421-22 (1966) (collateral estoppel can arise from an administrative decision).

In the ’972 IPR, the PTAB found Claims 12-14 of the ’307 Patent anticipated by Strub. Ex. 1014 at 25-26. In doing so, the Board necessarily found all elements of those claims present in Strub, including the following:

- locally receiving local audio generated by at least one performer during an audio event;
- locally recording the local audio as local audio data in at least one memory of at least one local audio device wearable by a creator of said local audio;

- locally receiving or generating master time data including hour, minute, and/or second data;
- wirelessly transmitting the locally generated audio to a remote recorder; and
- remotely recording the locally generated audio by the remote recorder as remotely recorded audio data.

See Ex. 1015 Claims 12-14; *see also* Ex. 1014 at 21 (finding Strub discloses “a local audio device that records local audio and transmits the local audio to other remote devices”), 22 (“Strub’s device is ‘wearable.’”);

The PTAB found Claim 1 of the ’307 Patent obvious over Strub with Nagai or Gleissner, Ex. 1014 at 19, 25, thus necessarily finding that Strub, Nagai and/or Gleissner teach “at least one local audio device...including...at least one audio input port for receiving said locally generated audio from an audio input device,” and that it would have been obvious to combine Strub with Nagai or Gleissner. *Id.* 4-5, 16-19.

In the ’1129 and ’1130 IPRs, the Board made similar findings regarding (1) the presence of the above-referenced limitations in Strub, Nagai, and Gleissner, and (2) the obviousness of combining those references. *See, e.g.*, Ex. 1017 at 25 (Strub’s device “wearable by a creator of said locally generated audio”), 35 (finding ’902 Claims 7-8 and 11 obvious over Strub, Nagai or Gleissner, and Woo), 40 (Strub

teaches a local audio device that records local audio and transmits it to a remote device), 41 ('902 Claims 12, 14, and 15 anticipated by Strub); Ex. 1018 at 21 (Strub's device "wearable by a creator of said locally generated audio"), 32 (finding numerous '814 Claims obvious over Strub, Nagai or Gleissner, and Woo). The Board also found that Strub discloses "at least one control unit electrically coupled to said local audio device receiver, said audio input device, said memory, and said local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory," that Woo discloses a "master timecode generator for generating a plurality of master timecodes," and that a POSA would have been motivated to use Woo's synchronization in Strub's system. Ex. 1017 at 25-31; Ex. 1018 at 22-28.

Zaxcom appealed the Board's decisions in all three Lectrosonics IPRs. The Federal Circuit affirmed each in its entirety. *Zaxcom, Inc. v. Lectrosonics, Inc.*, Nos. 2020-1350, 2020-1405, 2022 WL 499843, at *1-2 (Fed. Cir. Feb. 18, 2022); *Zaxcom, Inc. v. Lectrosonics, Inc.*, Nos. 2020-1921, 2020-1922, 2020-1943, 2020-1944, 2022 WL 499848, at *1-2 (Fed. Cir. Feb. 18, 2022).

Zaxcom is estopped from disputing: (1) the disclosure of the above limitations—or any materially identical limitations – by the cited references, and (2) the obviousness of combining Strub, Woo, Nagai, and Gleissner. These issues are identical to those actually litigated and decided in the Lectrosonics IPRs, the

resolution of which was essential to their Final Written Decisions, and Zaxcom had a full and fair opportunity to be heard. *See Google v. Hammond*, 54 F.4th at 1381.

2. **Collateral Estoppel Based on PTAB’s Findings Regarding Zaxcom’s Purported Objective Indicia of Nonobviousness**

In the Lectrosonics IPRs, Zaxcom alleged various evidence of objective indicia of nonobviousness. *See* Ex. 1019 at 52-59; Ex. 1020 at 54-66; Ex. 1021 at 34-59. The PTAB found that Zaxcom’s purported objective indicia related to the replacement of remotely recorded audio data with local audio data—a/k/a “dropout repair”—and had no nexus with claims lacking that feature. *See* Ex. 1014 at 23-25; Ex. 1017 at 31-35; Ex. 1018 at 28-31. Here, *none* of the Challenged Claims include dropout repair or replacing remotely recorded audio data with local audio data. Thus, they have no nexus with Zaxcom’s purported objective indicia. Zaxcom is estopped from contesting this finding for the same reasons set forth above.

VII. CLAIM CONSTRUCTION

Petitioner does not currently seek construction of any terms.

VIII. OVERVIEW OF THE PRIOR ART

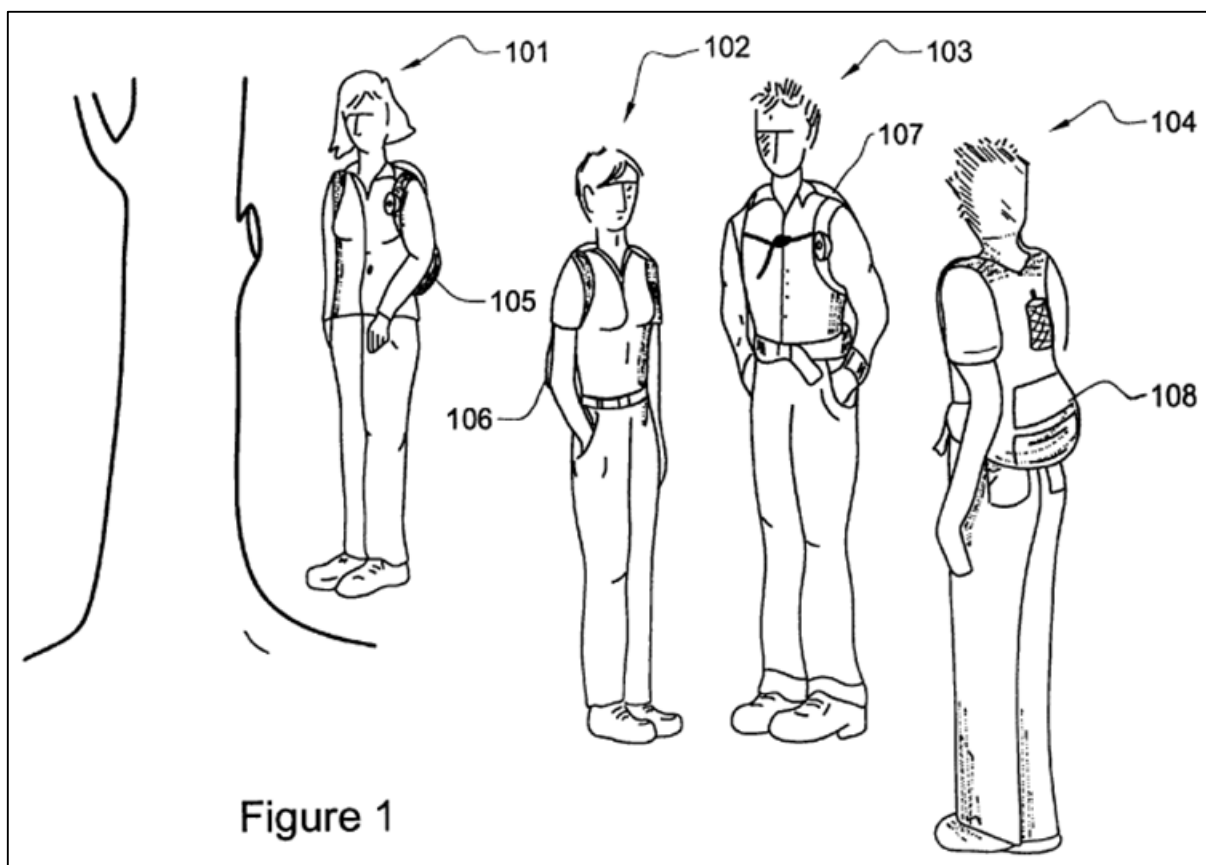
Petitioner asserts three grounds for invalidity based on the following six prior art references:

A. **Strub**

Strub is prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (e). It discloses a system comprising wearable recording units, each storing locally

generated audio/video and wirelessly transmitting it to one or more of the other wearable devices. *See, e.g.*, Ex. 1003, 4:28-30 (“wearable recording unit”), 8:7-19, 8:50-53, 12:13-21, 12:31-39 (“transmitter 309 transmits signals...representing recording data [to] other recording units...”), 14:59-15:11, 21:65-22:7, 35:54-65, 37:11-40, Figs. 1, 4, 6, 8A-9B.

Figure 1 illustrates examples of Strub’s audio/video recording units 105-108:



See also id. 8:7-13, 67:30-53, Figs. 4, 6, 8A-9B.

Strub discloses examples of master timecode generators—*e.g.*, a “‘master’ recording unit” that “transmit[s] a synchronization pulse...to each of the other

recording units,” *id.* 38:29-39, a GPS satellite “used as a clock to generate time-stamps,” *id.* 62:26-63:49, and a SMPTE timecode source, *id.* 75:25-57; *see also id.* 63:50-60.

B. Woo

Woo is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a system in which one or more recorders 14 and 16 record locally generated audio and transmit it to a remote device—editing station 34—which creates its own recording of the audio. *See* Ex. 1004, 5:3-5 (recorders 14 and 16 “independently capture[] the same performance....”), 5:37-49 (“communication of the respective recordings...to the editing station 34”), 8:32-44, 9:40-43, 9:56-63, Figs. 1, 4. Fig. 1 depicts Woo’s system:

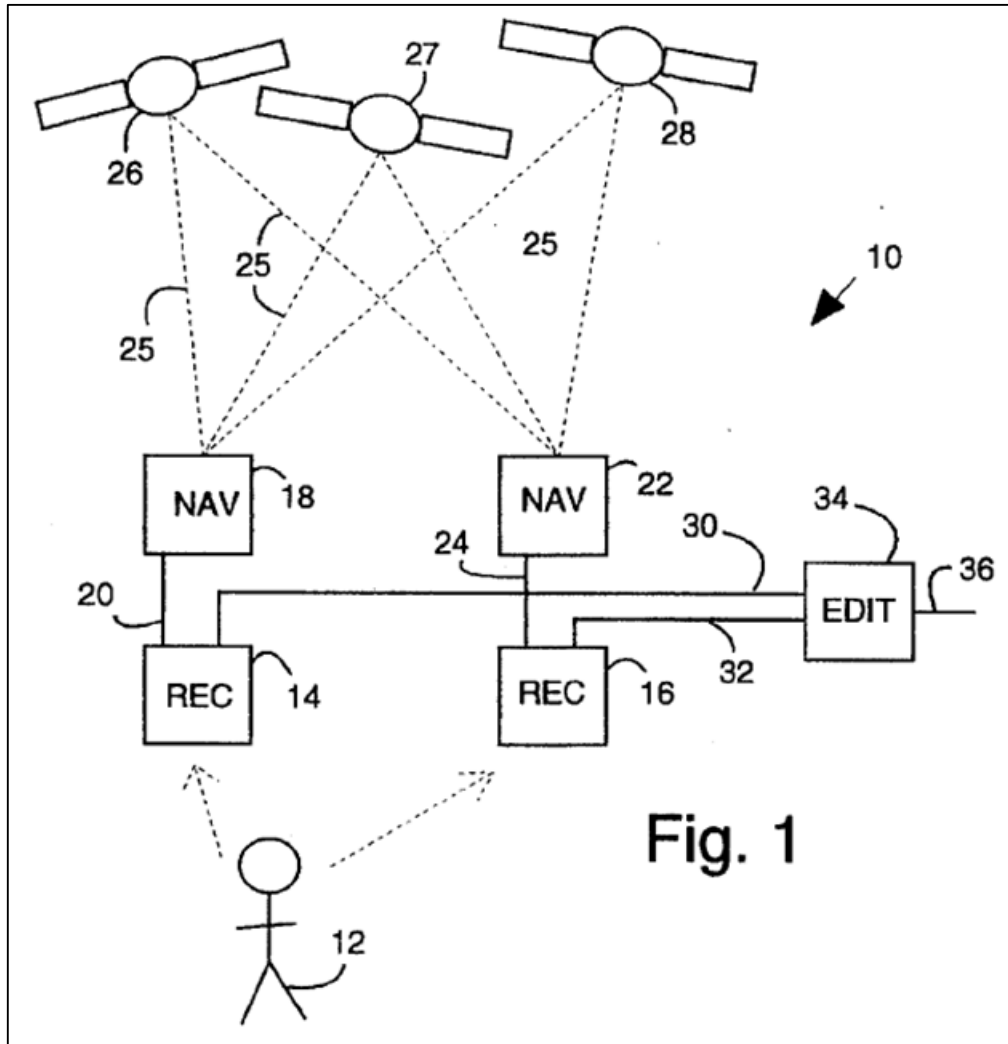
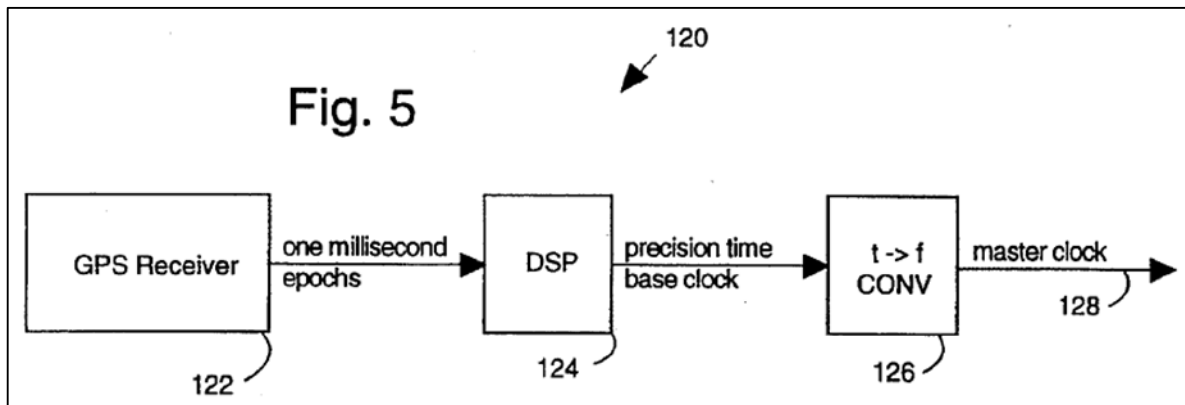


Fig. 1

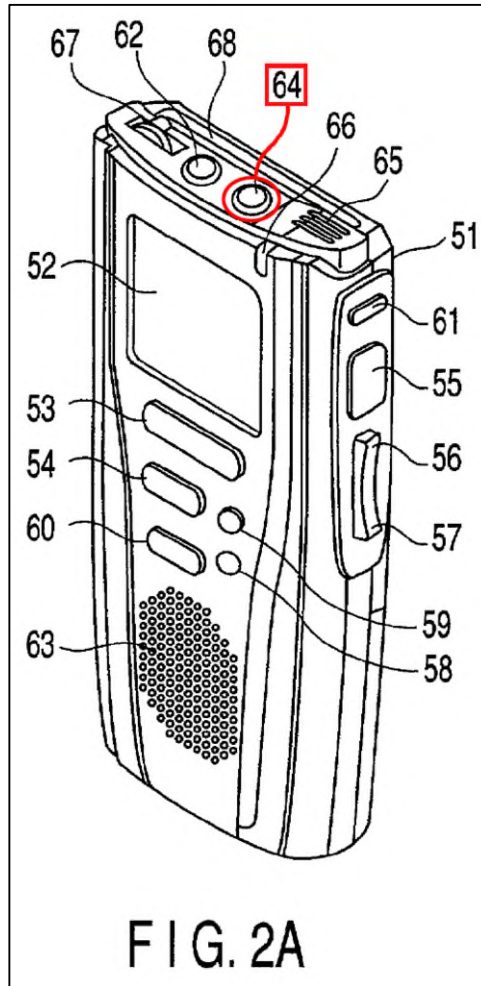
Each of Woo's local audio devices includes a local timecode generator and a GPS-based master timecode generator. *Id.* Abstract ("A GPS receiver...for communicating time code information...."), 7:26-50, 8:60-9:4, Figs. 1, 3, 5, 6. Fig. 5 illustrates using GPS signals to provide master timecodes—master clock output 128:



See also Ex. 1002, ¶ 75.

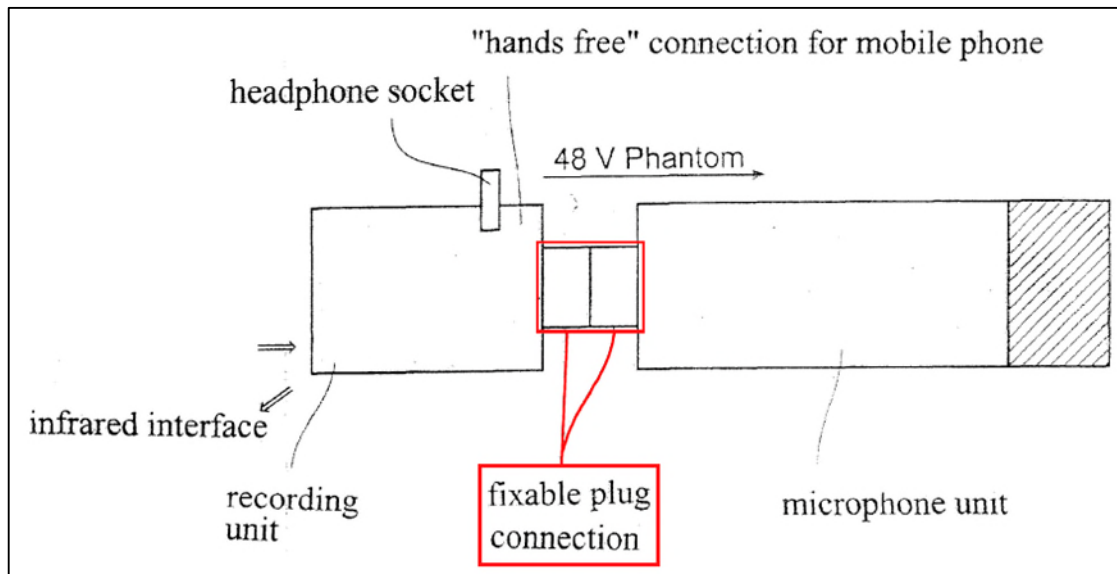
C. Nagai

Nagai is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It describes a voice recording apparatus with a memory card for storing voice data. Ex. 1005, Abstract, [0105]-[0106], [0115], Figs. 1, 4. Nagai's voice recorder has an audio input—microphone jack 2/64—configured to couple to an audio input device—*e.g.*, a microphone—to receive locally generated voice signals. *Id.*, [0100], [0109]-[0110], [0139], Fig. 1, 2A. Nagai's audio input—"mike [sic] jack" 64—is illustrated in Fig. 2A (annotated below):



D. Gleissner

Gleissner is prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e). It discloses a portable audio data recorder which stores locally generated audio in a memory. Ex. 1006, Abstract, [0025], [0031]. Gleissner's audio data recorder has an audio input—an XLR connector—to couple to an audio input device—a microphone—to receive locally generated audio. *Id.* [0013] (“XLR plug connection...[for] the microphone unit”), [0024], [0032]. Gleissner's audio input—the XLR connector—is depicted in Fig. 1 (annotated):

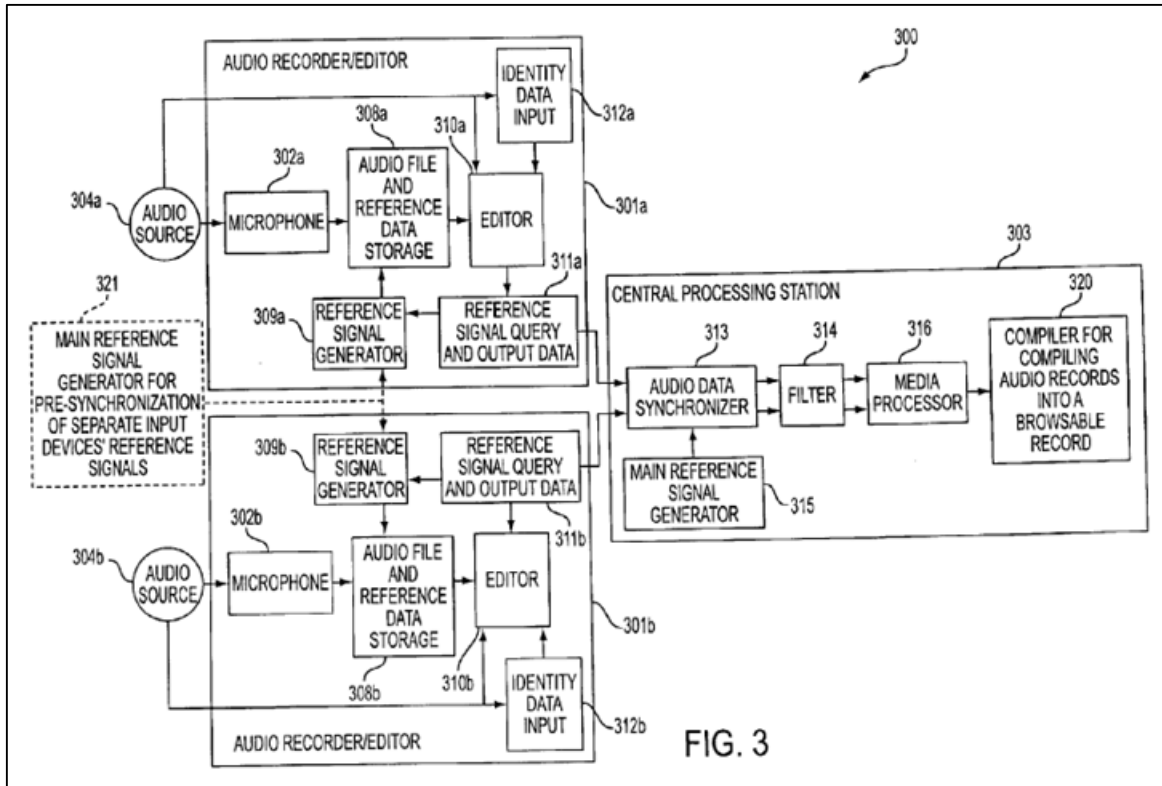


See also Ex. 1002, ¶ 83.

E. Samadani

Samadani is prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (e). It discloses local audio devices—*e.g.*, audio recorders/editors 301a/301b—for storing locally generated audio and transmitting it to a remote device—*e.g.*, central processing station 303—which comprises a receiver and a recorder. Ex. 1007, Abstract (“[C]apturing media” from “plural audio sources”; “producing audio data...and storing an audio record”), [0035] (“The media recorder/editors 301a and 301b are connected to a central processing station 303”), Fig. 3; *see also id.* [0045]-[0046], Figs. 5, 6.

An embodiment of Samadani’s system is depicted in Fig. 3:



Samadani's local audio device has a wireless transmitter—*e.g.*, reference signal query and output data component 311a/311b—which transmits the locally generated audio to the remote receiver/recorder. *Id.* [0036], Fig. 3, [0045] (“audio/visual recorders...connected via a wire or wirelessly to the processing stations”). Processing station 303 includes a remote recorder—*e.g.*, compiler 320—which stores the audio data. *Id.* [0038]; *see also id.* [0028], [0053], Figs. 1, 5.

Samadani's local audio device—*e.g.*, “media recorder/editor 301”—stores the local audio data in memory—*e.g.*, audio file and reference data storage 308a, 308b—“along with a reference data from one or more reference signal generators 309.” Samadani [0035], [0037], [0040], Figs. 3, 4.

Samadani's local device—audio/visual recorder 501a/501b—receives master timecodes—*e.g.*, reference signals containing time information—from a master timecode generator—*e.g.*, reference signal generator 509, which can be a GPS-based timing source. *Id.* [0047], [0048], Fig. 5; *see also id.* [0038]-[0039], Fig. 3 (main reference signal generator 321). Samadani teaches the use of master timecodes—*e.g.*, the reference signals from reference signal generator 321—to synchronize a local timecode generator—*e.g.*, reference signal generators 309a/309b—prior to recording. *Id.* [0039], [0040], [0042], [0047], Figs. 3-5. Samadani's stored local audio data includes time stamps—*e.g.*, a reference signal. *Id.* [0040] (“reference signal...stored as reference data in the audio file....”), [0037], [0048]; *see also* Ex. 1002, ¶ 89.

F. Prosecution of the '444 Patent and the Lectrosonics IPRs

Strub, Woo, Nagai, and Gleissner were not considered in the prosecution of the '444 Patent. However, Strub, Woo, Nagai, and Gleissner were considered in the Lectrosonics IPRs, in which the Board found claims similar to the Challenged Claims unpatentable over Strub alone and over the combinations of Strub with Woo, Nagai, and/or Gleissner. *Supra* § VI.C.

Samadani was not considered in the prosecution of the '444 Patent or in the Lectrosonics IPRs.

IX. SPECIFIC GROUNDS FOR INVALIDITY

A. Ground 1: Claims 1-7, 9-10, 13-15, 17-20, 22-23, and 27 are Rendered Obvious Under § 103 By the Combination of Strub and Woo

1. A POSA Would have Been Motivated to Combine Strub and Woo

In the Lectrosonics IPRs, the PTAB found that a POSA would have motivated to combine Strub and Woo, and that the combination would have been obvious. *See supra* VI.C. Zaxcom is collaterally estopped from disputing those findings. *Id.*

The teachings of Strub and Woo provide substantial motivation to combine them. The systems in Strub and Woo are the same type of apparatus for the same purpose—receiving and recording local audio in a local device, wirelessly transmitting the same audio to a remote device, and recording the audio in the remote device. *See, e.g.*, Ex. 1003, 8:50-53, 12:13–21, 12:31–39, 21:65-22:7, 35:54–65, 37:11–40, Figs. 1, 4, 6, 8A-9B; Ex. 1004, 5:3-5, 5:37-49, Fig. 1. In addition, Strub and Woo’s local audio devices wirelessly receive master timecodes from a master timecode generator and use timing information from the master timecodes to stamp the local audio. *See, e.g.*, Ex. 1003, 13:50-58, 63:50-60, 79:54-80:9; Ex. 1004, Abstract, 1:60-2:9, 2:39-48, 3:3-24, 3:37-67, 4:3-32, 4:62-64, 5:37-45, 7:26-50, 8:32-44, 8:60-9:4, 9:40-43, 9:56-63, Figs. 3-6.

Woo provides express motivations to use its synchronization methods in a wireless, multi-recorder system such as Strub’s. For example, Woo’s master clock

(1) provides accurate synchronization across recorders, (2) can generate coordinated timecodes at independent sites, (3) is simple to connect to the recorders, and (4) provides standardized, SMPTE-compatible timecodes. Ex. 1004, 4:3-44; *see also* Ex. 1017 at 29. In addition, modifying Strub’s recording unit to use conventional SMPTE-formatted timecodes from Woo’s master clock would involve merely combining familiar elements according to known methods to improve Strub’s system and yield predictable results. Ex. 1002, ¶ 93.

Moreover, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007). Motivation to combine is particularly strong where “there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions.” *Id.* at 421. This is especially true where the cited references teach (1) “all the limitations of [the challenged] claims,” and (2) the same “known problem” addressed by the challenged patent. *Ball Aerosol and Specialty Container, Inc. v. Ltd. Brands, Inc.*, 555 F.3d 984, 993 (Fed. Cir. 2009).

The ’444 Patent sought to solve the problem of matching timing between recordings produced by wireless devices, Ex. 1001, 1:40-2:5, by generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timing information in those timecodes to time-stamp

the locally recorded audio data. *Id.* 3:11-14, 3:66-4:22, 4:48-5:6, 5:65-6:4, 10:49-11:1, 11:26-32, 14:52-60, 15:32-36, 16:44-47, 17:9-22, Figs. 3A, 4A, 4B, 5, 6. Strub and Woo recognized and solved that same problem. *See* Ex. 1003, 13:50-58 (using clock “to time-stamp the recording data obtained by the recording unit.”), 62:26-63:49, 63:50-60, 75:25-57, 79:54-80:9; Ex. 1004, Abstract, 1:60-2:9, 2:39-48, 3:3-24, 3:37-67 (synchronizing local timecode generator to a master timecode generator), 4:13-19, 5:5-10, 5:21-29, 5:37-45 (recordings “date and time tagged”), 7:26-50, 8:60-9:4, 9:33-39, 9:45-55, 10:15-11:1, Figs. 1, 3-6; *see also* 1002, ¶ 94.

In addition, “when a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 550 U.S. at 417. Every element of Challenged Claims 1-7, 9-10, 13-15, 17-20, 22-23, and 27 appears in Strub and/or Woo. *See infra* § IX.A.2. Those elements comprise standard, off-the-shelf, audio-recording components that would be familiar to any POSA. Ex. 1002, ¶ 95. There is nothing unpredictable about the claimed use of those components in a wireless audio-recording system. *Id.*; *see KSR*, 550 U.S. at 417 (improvement should be “more than the predictable use of prior art elements according to their established functions.”). Furthermore, the technology and operation of such components was well-understood in the relevant time period such

that the combination of Strub and Woo would have had a high likelihood of success.

Ex. 1002, ¶ 96.

Since Strub and Woo teach the same kind of device used for the same purpose, since they identified the same problem identified in the '444 Patent and solved it in the same way, since the combination of elements in the Challenged Claims is merely “the predictable use of prior art elements according to their established functions,” and since the combination of Strub and Woo would have had a high likelihood of success, a POSA would have been motivated to combine Strub and Woo.

2. **The Combination of Strub and Woo Meets All Elements of Challenged Claims 1-7, 9-10, 13-15, 17-20, 22-23, and 27**

As discussed below, the Preambles and every element of Claims 1-7, 9-10, 13-15, 17-20, 22-23, and 27 are taught by Strub and/or Woo. To the extent Patent Owner alleges that Strub or Woo fails to teach any claim element, that element is provided by the other reference. Further, to the extent the teachings of Strub and Woo are substantively different for any given claim element, it would have been at least obvious to try the other reference's implementation of that element, given the overall similarity in their purpose, design, and operation.

a. **Claim 1.**

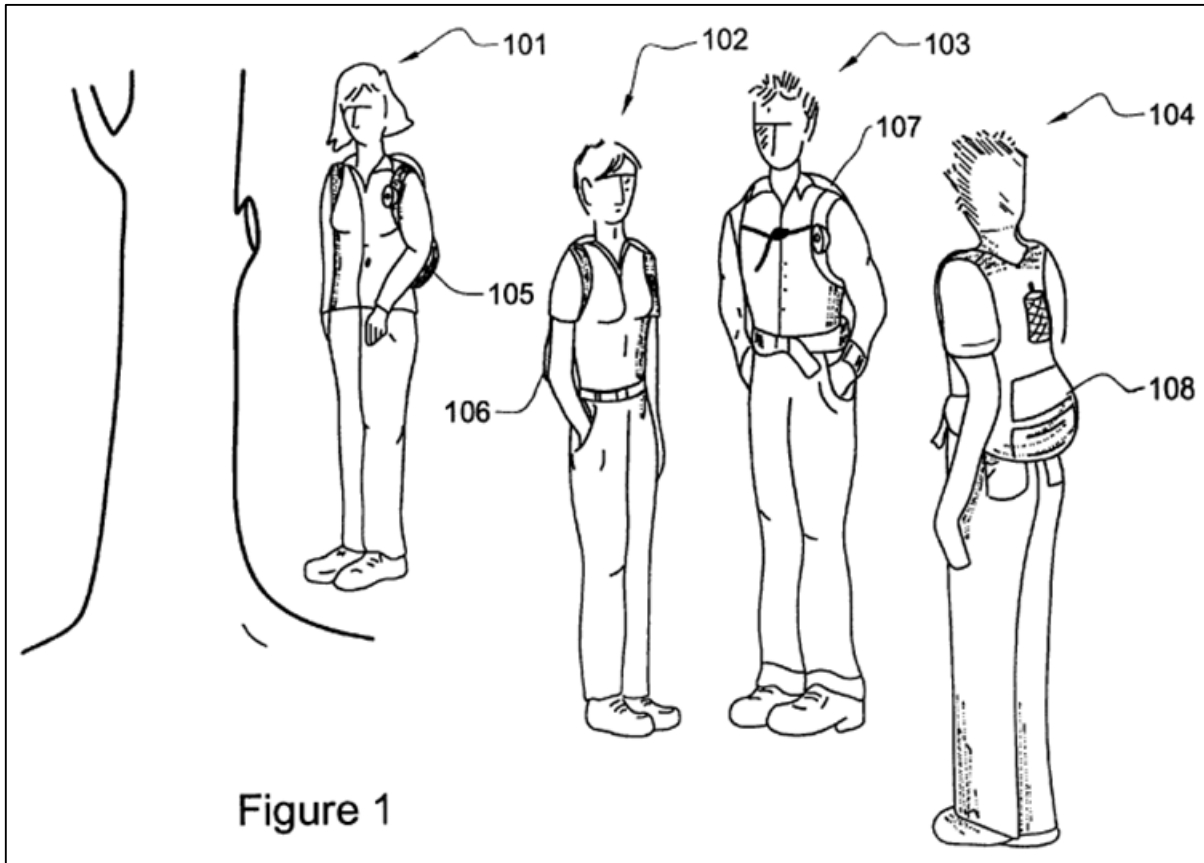
Challenged Claim 1 has mostly the same limitations as '814 Patent Claim 1, which was found unpatentable in the Lectrosonics '1130 IPR, except that:

Challenged Claim 1 additionally recites: (1) substantially simultaneously transmitting audio data to a remote device, and (2) timestamps referencing local data to at least one of master timecodes (as opposed to '814 Claim 1's local timecodes). Ex. 1001, Claim 1; Ex. 1028, Claim 1, IPR Certificate at 1:6-7. However, transmitting audio data to a remote device and receiving master time data are present in Claims 12 and 13 of the related '307 Patent, which were found unpatentable in the Lectrosonics '972 IPR. Ex. 1015, Claims 12, 13, IPR Certificate at 1:5.

(1) **1[Pre]: “A system for locally recording locally generated audio as time-referenced local audio data and for substantially simultaneously transmitting audio data to a remote device, the system comprising:”**

Regardless of whether the preamble of Claim 1 is limiting, Strub teaches it. The Lectrosonics IPR Board found Strub discloses “a local audio device that records local audio and transmits the local audio to other remote devices” and “creating stamped local audio data and storing said stamped local audio data in said memory.” *Supra* § VI.C. Zaxcom is collaterally estopped from disputing those findings. *Id.*

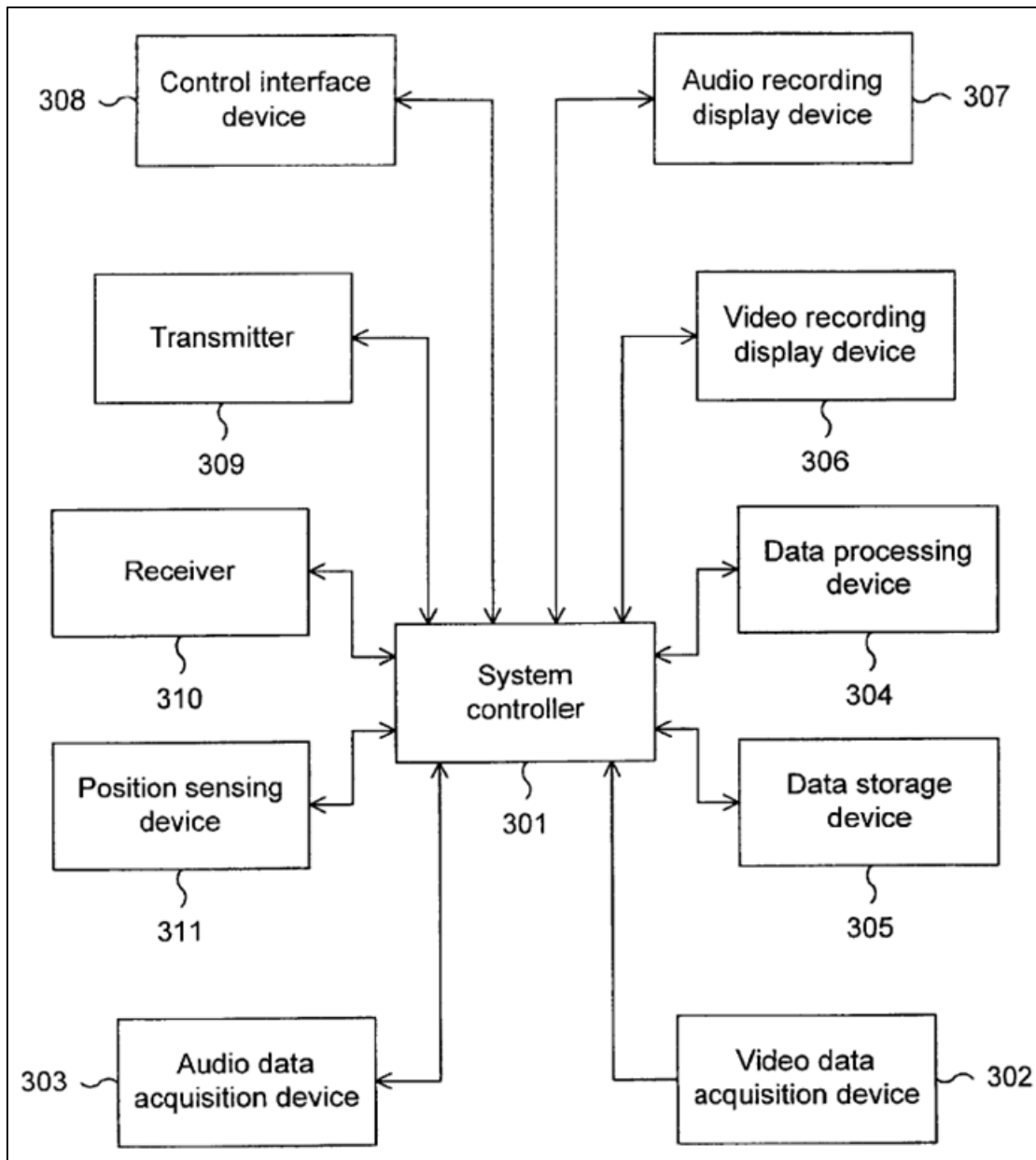
Strub's recording units 105-108, 200, and 300 are worn by a plurality of users:



Ex. 1003, Fig. 1.

Each recording unit stores locally generated audio and transmits the audio to a remote device—*e.g.*, a different recording unit—which also records it. *See id.* 8:10-29, 8:50-53, 11:32-50, 12:13-21, 12:31-43 (“[T]ransmitter 309 transmits... recording data acquired by the recording unit 300 [to] other recording units.”), 25:35-49, 35:54-65, 37:18-40, 38:1-4, Figs. 1-3; *see generally id.* 35:53-38:39.

Fig. 3 depicts the internal components of Strub’s local and remote audio devices:

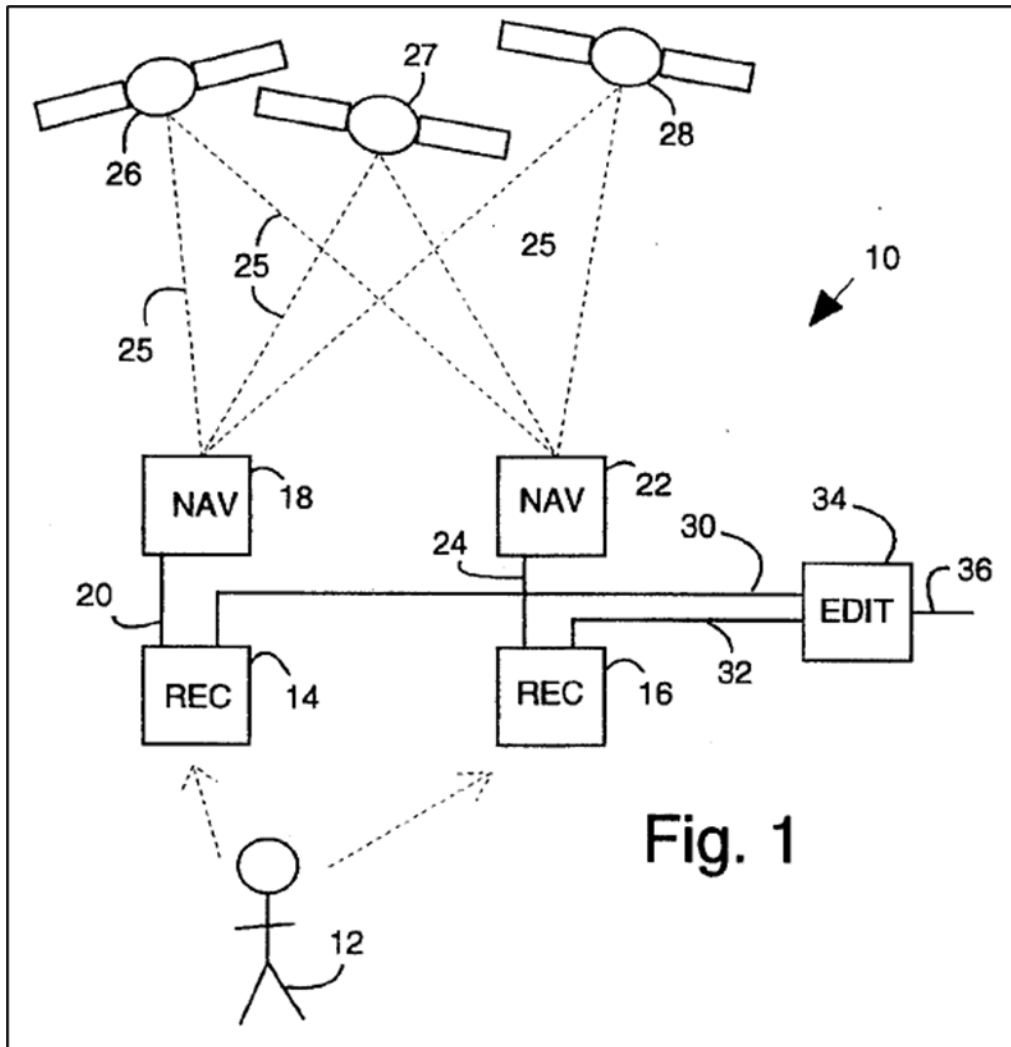


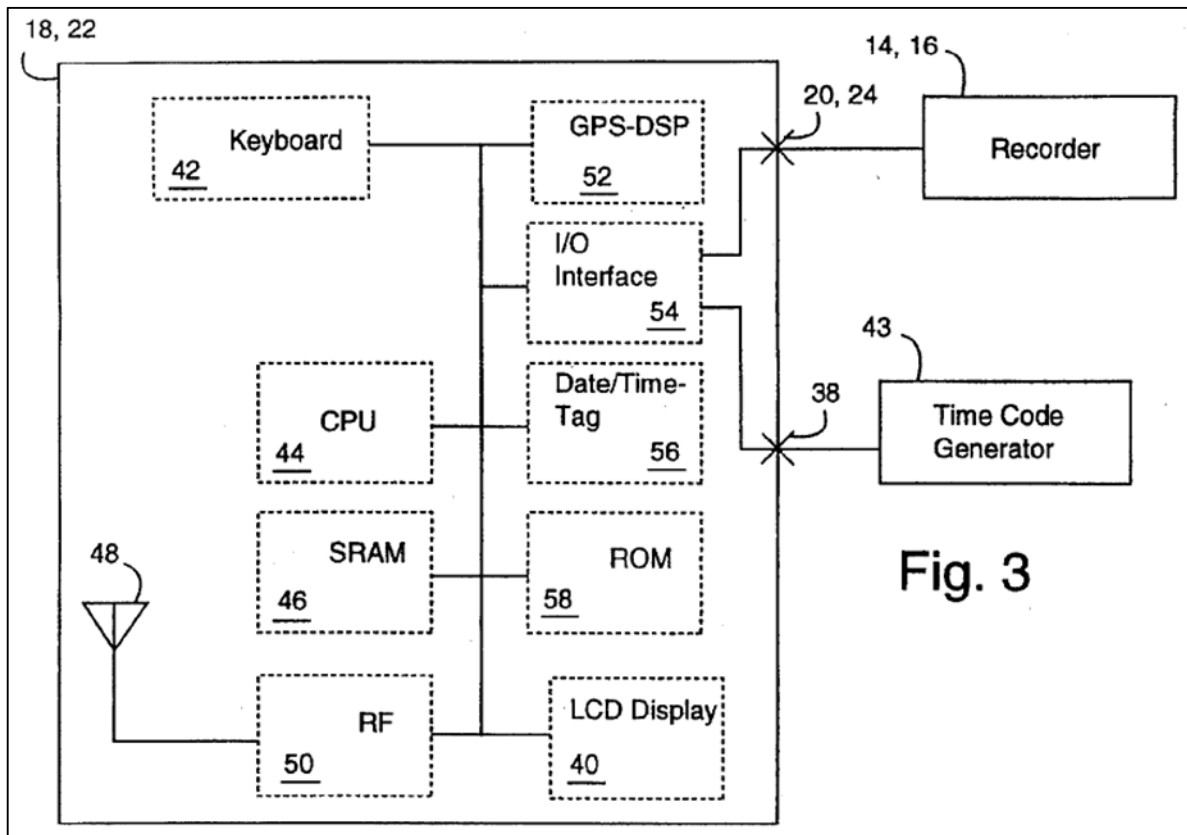
The system controller 301 in Strub’s local audio device “can include a clock that is used to time-stamp the recording data obtained by the recording unit.” Ex. 1003, 13:50-58, 63:56-60. The time-stamping is performed using timecodes. *Id.* 6:65-7:24 (establishing “temporal correspondence” by storing a “time code on the videotape”); 78:3-40; 29:42-62, 77:24-28 (“writ[ing] a time code to the...data

storage...indicating the time the recording data was obtained.”); 84:20-25. A POSA would understand that applying time stamps or timecodes to the local audio data time-references the local audio data. Ex. 1002, ¶ 102.

The transmission is sent to Strub’s remote device while the recording is “being obtained” by the local device—*i.e.*, storage and transmission occur substantially simultaneously. Ex. 1003, 10:25-49 (“recordings...shared between or among recording units **during the event** so that recorders can observe **recordings that...are being, obtained by other recording units.**”), 4:54-57, 35:61-36:2 (“[A] recording unit [can] display and/or store, **during the event**, a recording being obtained by another recording unit.”), 38:8 (“Recording data can be **transmitted as acquired.**”), 38:20-24, 44:48-45:8 (“display device...**simultaneously** displaying multiple visual recordings at one time” including “recordings **being obtained by more than one recording unit,**”); 85:18-23.

Woo also teaches the preamble. Woo’s system includes at least one local audio device—*e.g.*, recorder 14/16 and GPS receiver 18/22—which records locally generated audio and transmits it to a remote recorder—editing station 34—which also records it, as depicted in Figs. 1 and 3:





See also Ex. 1004, 5:3-5 (recorders 14/16 “capture[] [a] performance”), 5:37-49 (recordings simultaneously communicated to editing station 34), 8:32-44, 9:40-43, 9:56-63, Figs. 1, 3, 4.

Woo’s local audio device includes “a date and time tag unit 56 and a read only memory (ROM) 58.” *Id.* 7:59-60, Fig. 3. “ROM 58...includes an application program for generating SMPTE time codes....” *Id.* 8:21-22. Woo’s local audio device can also employ “commercially-available time code generator 43” to generate time codes. *Id.* 7:28-29, Fig. 3. Based on the timecodes, the date and time tag unit 56 provides time stamps—“date and/or time tag[s]”—for time-referencing the local

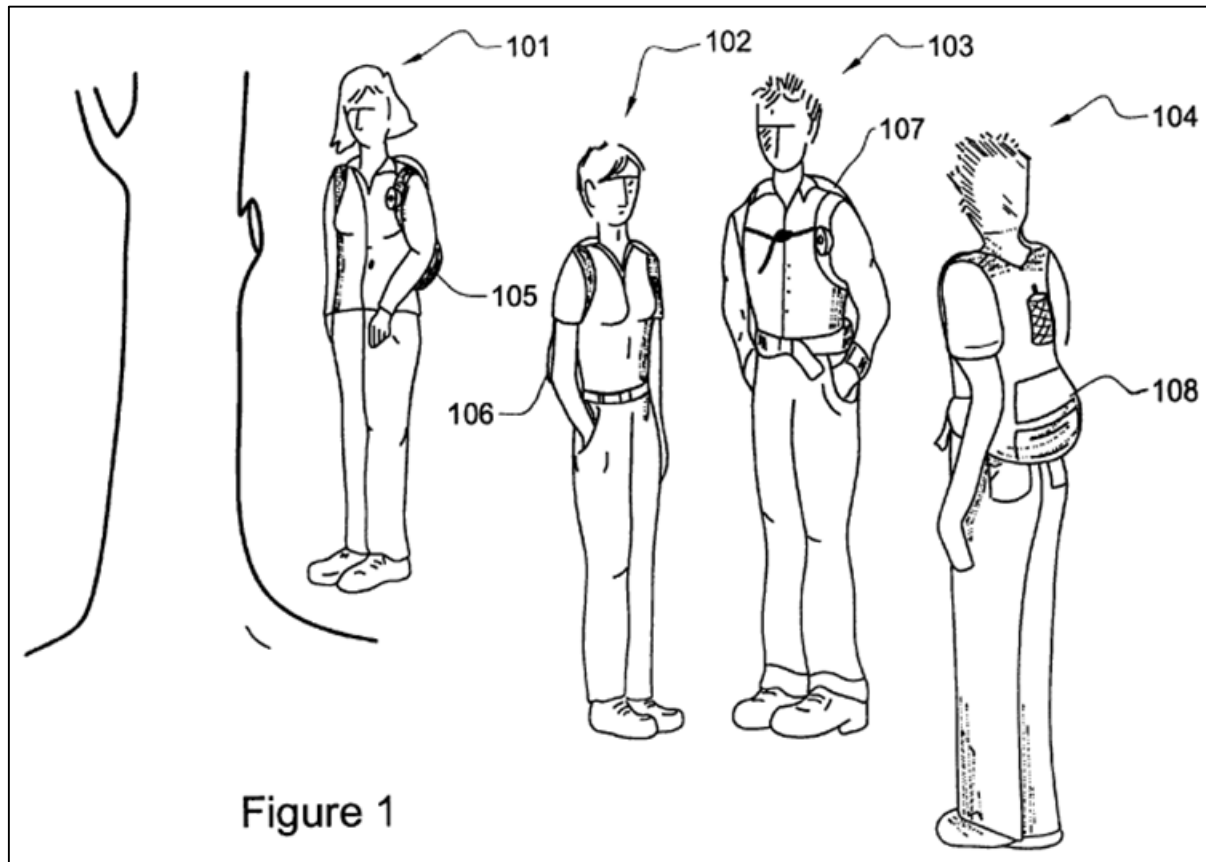
audio data, which is stored in a memory in the recorder 14/16. *Id.* 8:11-21 (“Time code information is generated [using] date and time information...from...[GPS] navigation satellite transmissions.”), 8:25-44 (tagging a recording with GPS date/time information), Figs. 3, 4; *see also id.* 1:60-2:1 (time codes stored with recorded content), 5:37-45 (recorders 14/16 date/time tagging recordings and each “transmit[ing] their respective recordings...to an editing station 34”); Ex. 1002, ¶ 106.

Woo teaches that the transmission of the audio data to the remote device can be done in real time—*i.e.*, at the same time that the audio is being locally stored. Ex. 1004, 8:51-54 (“*[T]he combining and generating* [by an editing station 34] *may be done in real-time* with the performance.”), 10:7-10; *see also* Ex. 1002, ¶ 107.

(2) **1[A]: “a remote receiver, the remote receiver configured to create at least one master timecode and to receive audio data; ”**

The Lectrosonics IPR Board found that: (1) Strub teaches (a) “a local audio device that...transmits...audio to other remote devices”—*i.e.*, there is necessarily a remote receiver that receives audio data from local audio devices—and (b) generating—*i.e.*, creating—master time data; (2) Woo discloses a “master timecode generator for generating a plurality of master timecodes”; and (3) a POSA would have been motivated to use Woo’s synchronization techniques in Strub’s system—findings Zaxcom is collaterally estopped from disputing. *Supra* § VI.C. In any

event, Strub teaches this element.



Each of Strub's recording units 105-108 transmits locally generated audio data to other different recording units, each of the other units thus comprising a remote receiver for receiving audio data. *See* Ex. 1003, 8:10-29, 8:50-53, 12:31-43 (“[T]ransmitter 309 transmits...recording data acquired by the recording unit 300, so that such recording data can be used by other recording units.... The receiver 310 receives recording data signals representing recording data acquired by one or more other recording units”), 25:35-49, 35:54-36:9, 37:18-40, FIGs 1-3.

Additionally, Strub teaches using one of these recording units as a “‘master’ recording unit” that “transmit[s] a synchronization pulse...to each of the other recording units”—*i.e.*, the local audio devices—to allow them to synchronize their recordings. *Id.* 38:29-39. Strub’s synchronization pulses comprise master timecodes. Ex. 1002, ¶ 112.

A POSA would have considered it obvious for Strub’s remote receiver—the one receiving audio—to be the one to generate the master timecodes/synchronization pulses. More particularly, Strub teaches embodiments in which the remote receiver receives audio data from multiple other recording units—*i.e.*, local audio devices. *Id.* 12:39-41 (“The receiver 310 receives...recording data acquired by one ***or more other recording units***...”), 35:57-61, 37:32-36 (“[A] recording unit...may be implemented so that recording data from ***multiple recording units*** can be recorded simultaneously....”). Strub further teaches using timecodes to synchronize recordings between recording units. *See, e.g., id.*, 7:11-24, 75:47-51, 78:7-40, Ex. 1002, ¶ 112. Since Strub’s remote receiver is the unit receiving audio from multiple sources, a POSA would have recognized the desirability/practicality of having the remote receiver generate master timecodes for all the units so that all the received audio is synchronized to its own clock or time reference. At minimum, it would have been obvious to try using the remote receiver, rather than one of the other three recording units, as master timecode generator, as there is a limited number of

choices. Ex. 1003, FIG. 1. Furthermore, since the generation and transmission of master timecodes was well-understood, using the remote receiver as the master timecode generator would have had a high likelihood of success. Ex. 1002, ¶ 112.

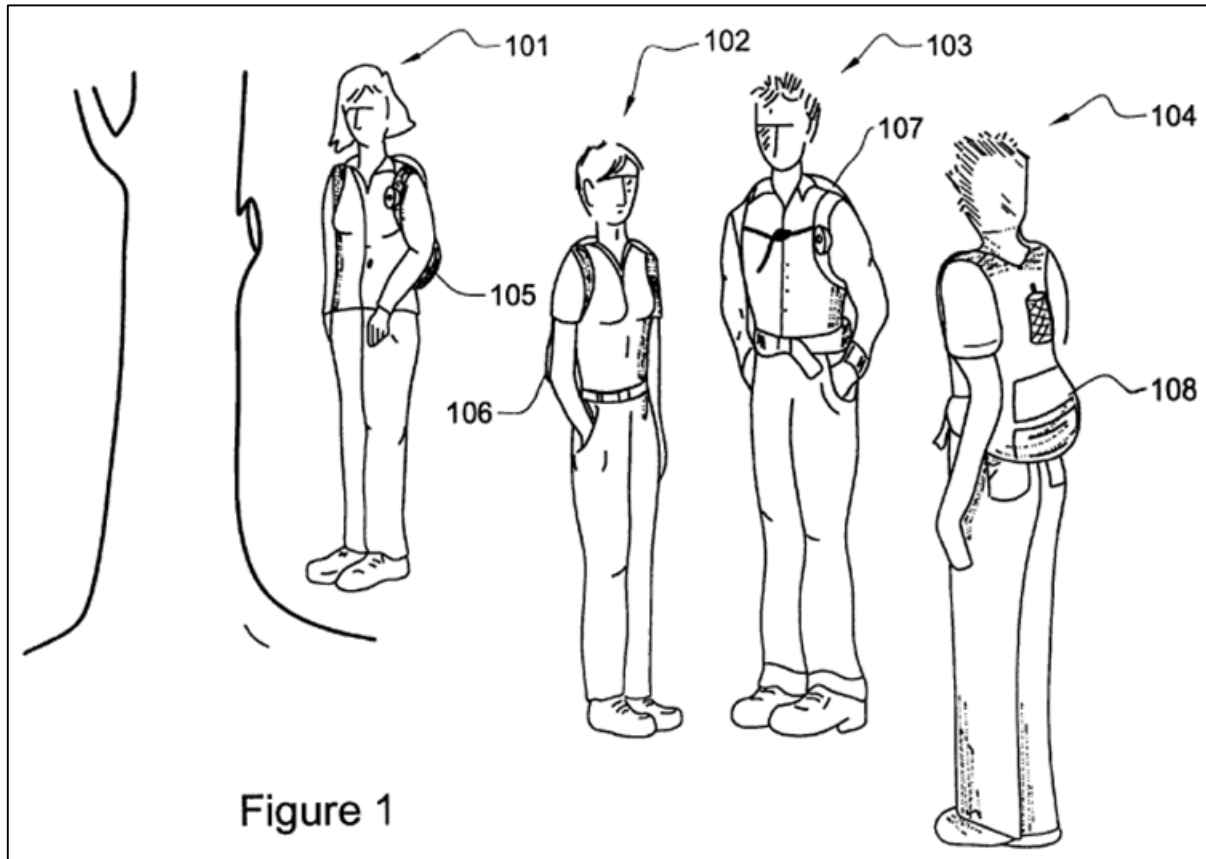
Alternatively, the remote recording unit (“remote receiver”) can also create master timecodes with a “position sensing device” comprising a “GPS receiver” that uses “current time” from GPS satellites. Ex. 1003, FIG 3, 12:4-10, 62:53-55, 63:41-60. The remote recording unit can also be a camcorder having an “SMPTE time code input.” *Id.* Abstract, 5:23-29, 75:7-57. To reduce cost and complexity a POSA would have been motivated to include the GPS receiver and/or SMPTE receiver/input in just one of the recording units (i.e., the remote receiver) and have that recording unit create and send the master timecodes to the other recording units. Ex. 1002, ¶ 113.

(3) **1[B]: “a local audio device capable of communicating with the remote receiver and configured to receive locally generated audio”**

The Lectrosonics IPR Board found that Strub teaches “a local audio device that records local audio and transmits the local audio to other remote devices,” the local audio device including an “at least one audio input port for receiving said locally generated audio from an audio input device.” *Supra* § VI.C. Zaxcom is collaterally estopped from disputing that finding. *Id.*

Strub discloses at least one local audio device—*e.g.*, one of recording units

105-108:

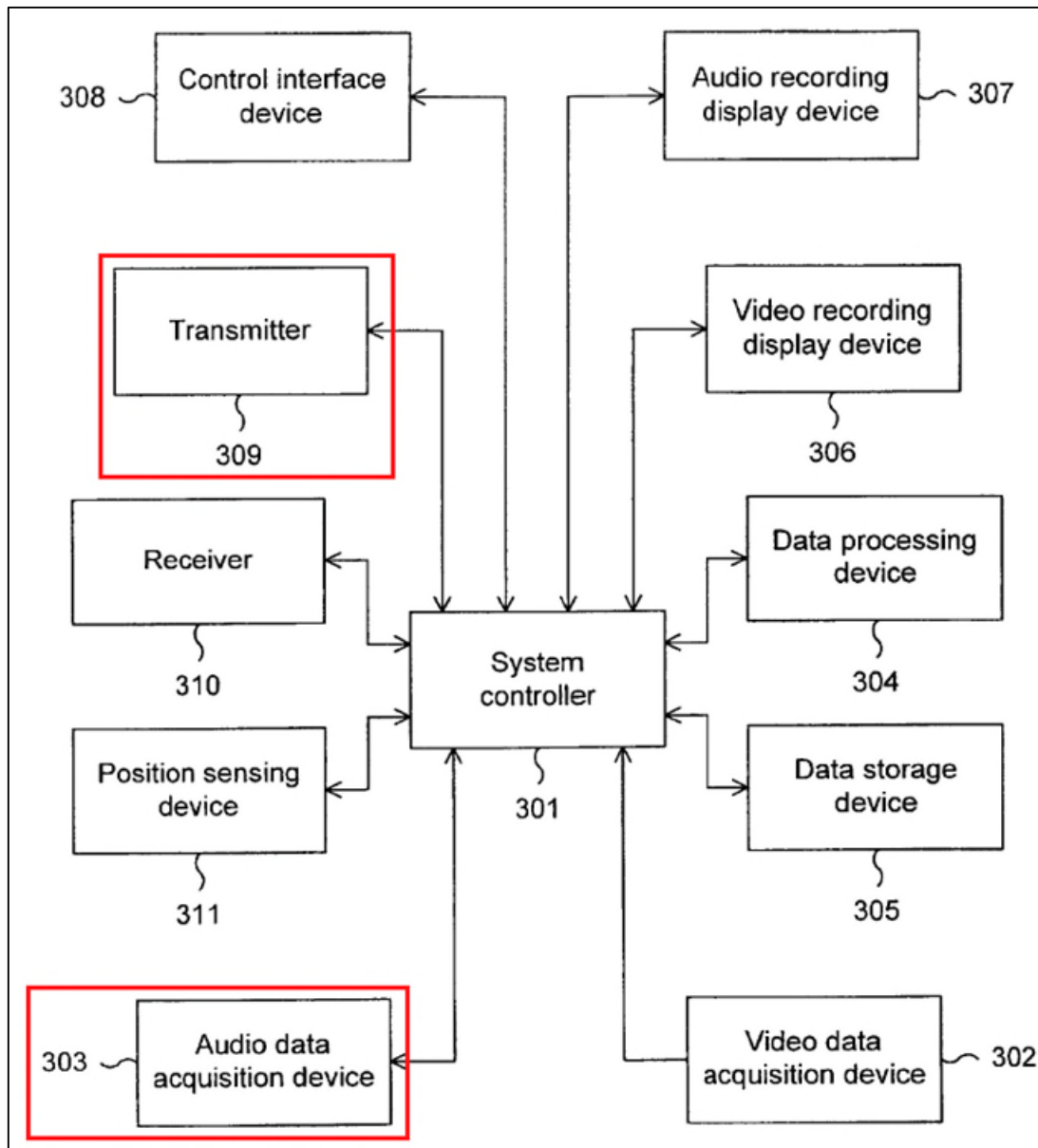


See also Ex. 1003, Figs. 2, 3 (recording units 200, and 300).

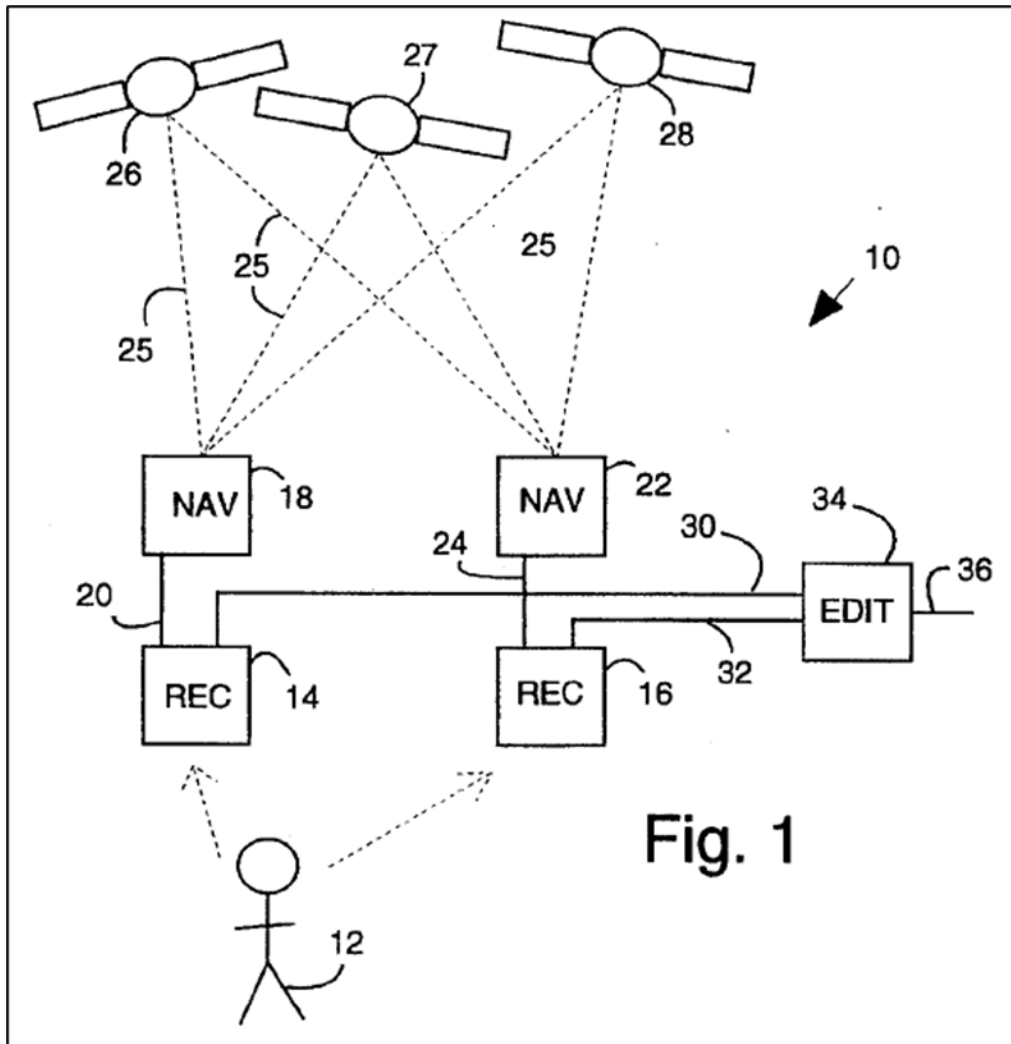
Each of Strub's recording units receives locally generated audio through a microphone and communicates the locally generated audio to a remote receiver—*e.g.*, a different one of recording units. See *id.* 8:10-29, 8:50-53, 11:32-50, 12:13-21, 12:31-43 (“[T]ransmitter 309 transmits...recording data acquired by the recording unit 300...[to] be used by other recording units.”), 21:65-22:2 (microphones as audio data acquisition device); 22:64-23:31, 25:25-49, 35:54-65,

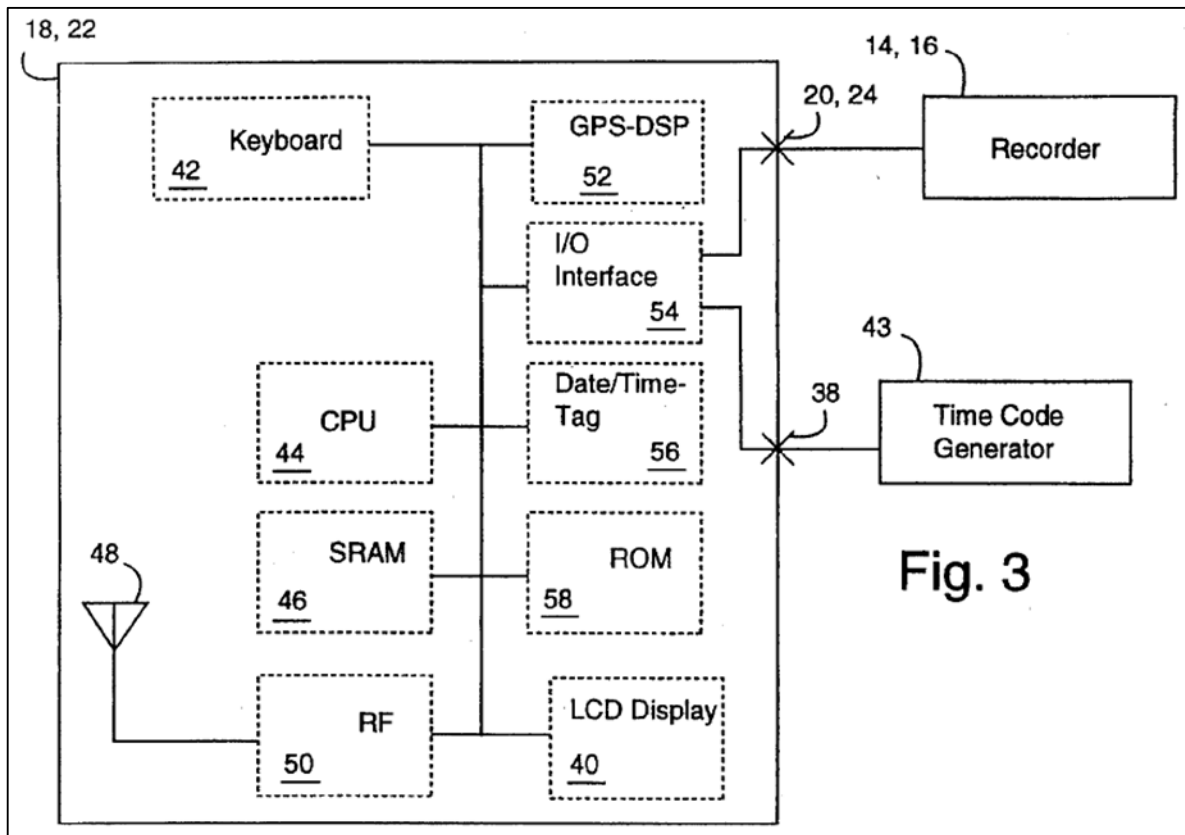
37:18–40, 38:1–4, 60:3-5 (microphone), Figs. 1-3; *see generally id.* 35:53-38:39 (“Communication Between Recording Units”).

The internal components of Strub’s local audio device, including the audio data acquisition device 303 (*e.g.*, a microphone) for receiving the locally generated audio and the transmitter 309 for communicating with the remote receiver, are depicted in Fig. 3:



Woo also teaches this limitation. Woo's system includes at least one local audio device—*e.g.*, an arrangement comprising recorder 14/16 and GPS receiver 18/22—which receives locally generated audio and communicates the audio to the remote receiver and recorder—editing station 34, as depicted in Figs. 1 and 3:



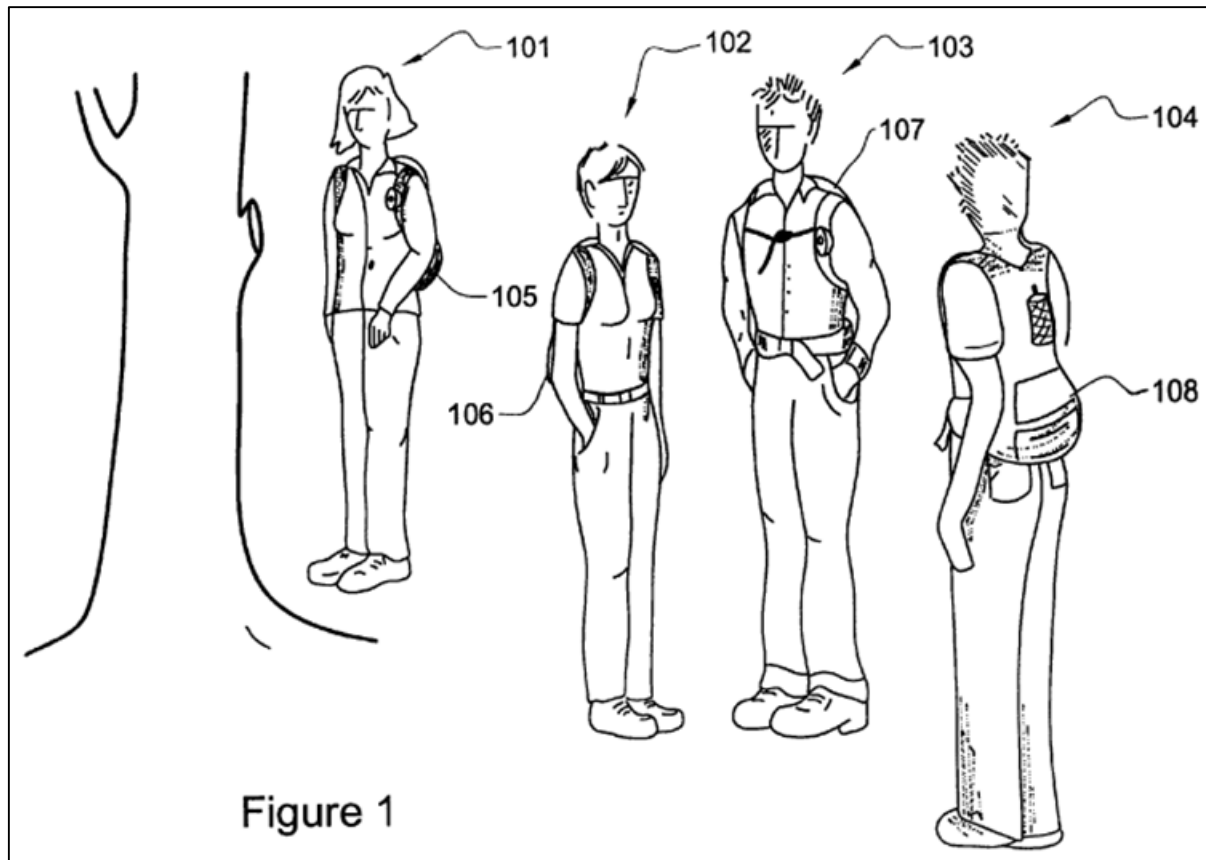


See also Ex. 1004, 5:3-5 (recorders 14 and 16 capture a performance), 5:37-49 (“[Fig. 1] connections 30 and 32 represent the communication of the respective recordings by wire [or] radio link...to the editing station 34.”), 8:32-44, 9:40-43, 9:56-63, Figs. 1, 3, 4. See also Ex. 1002, ¶ 119.

(4) **1[C]: “the at least one local audio device wearable by a creator of the locally generated audio,”**

The Lectrosonics IPR Board found that Strub’s local audio device is “wearable by a creator of said locally generated audio.” *Supra* § VI.C. Zaxcom is collaterally estopped from disputing that finding. *Id.*

For example, Strub expressly states that each of its local audio devices—recording units 105-108, 200, and 300—is wearable by a creator of the locally generated audio—participants 101-104. *See, e.g.*, Ex. 1003, Fig. 1:

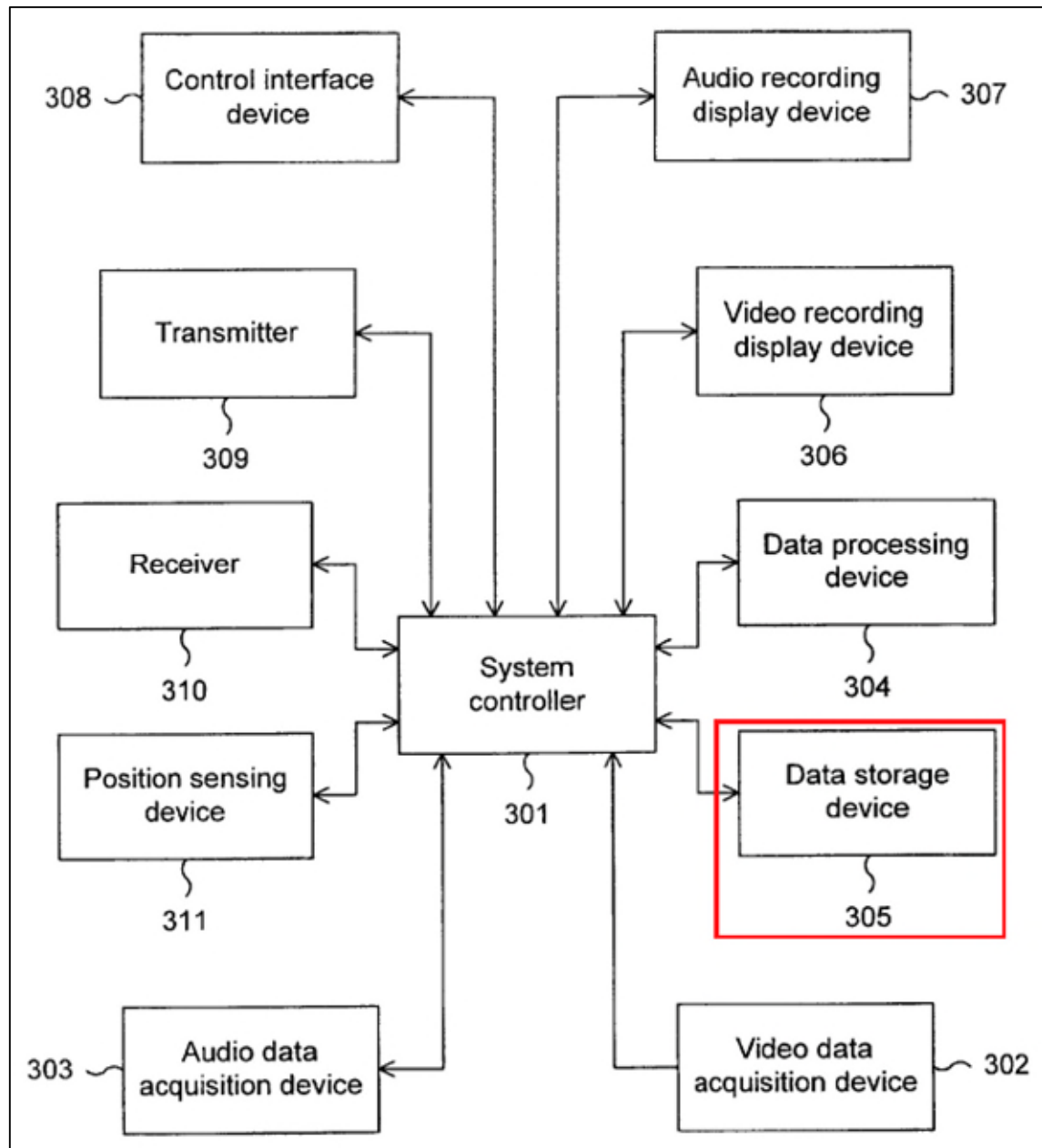


Id. 4:21-31 (“a small, lightweight, wearable recording unit”), 8:7-12, 14:59-15:11 (“for the recorder to wear”), 16:66-17:24, 38:65-39:11, 66:33-51, 67:54-68:10, 72:9-19; *see also* Figs. 4, 6, 8A-9B; Ex. 1002, ¶¶ 121-22.

(5) **1[D]: “the at least one local audio device including: at least one local memory;”**

The Lectrosonics IPR Board found that Strub teaches that the local audio device has a memory. Zaxcom is collaterally estopped from disputing that finding. *Supra* § VI.C.

Strub’s local audio device includes at least one local memory—*e.g.*, data storage device 305:

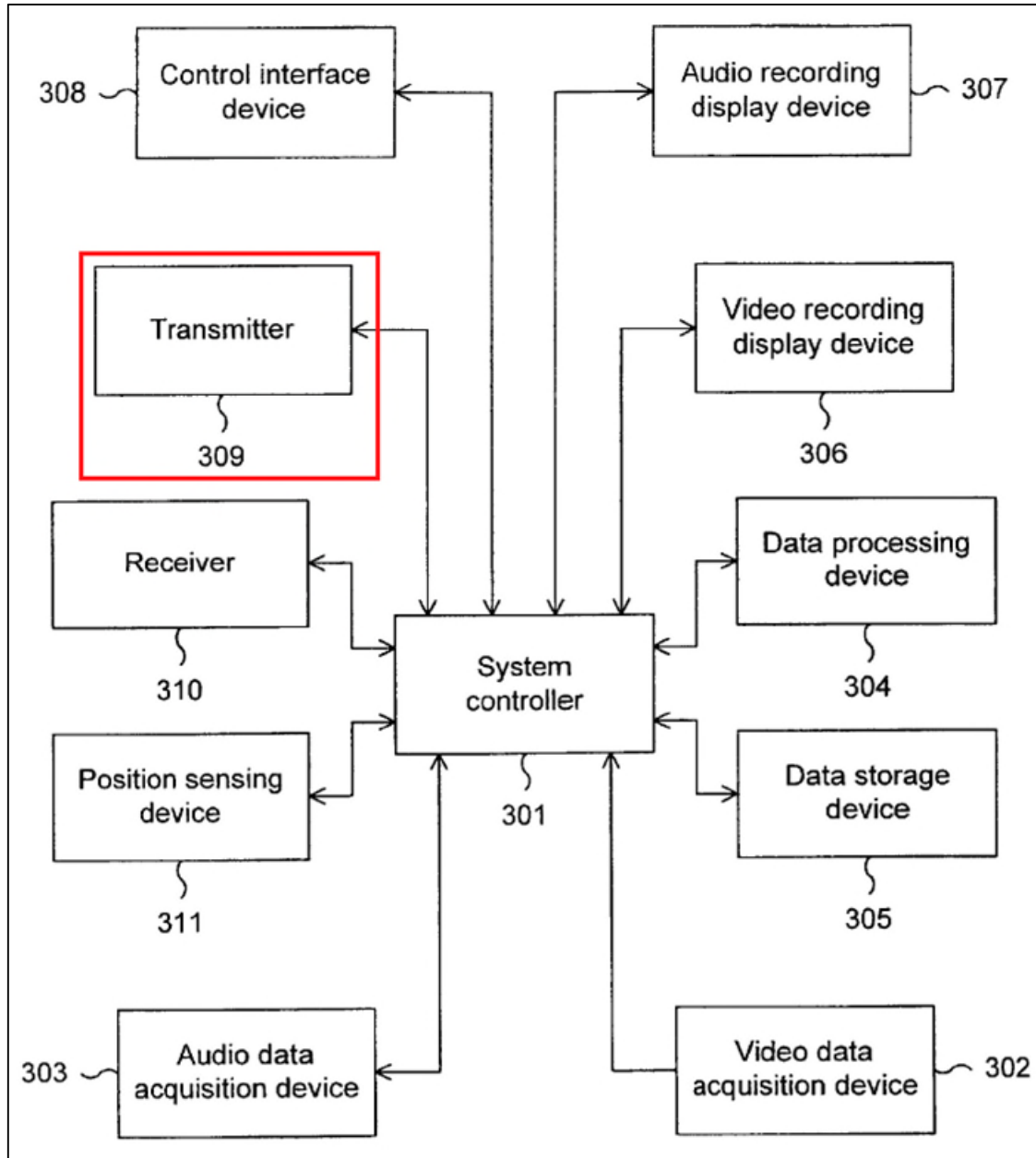


Ex. 1003, Fig. 3 (annotated), 12:13-21. Data storage device 305 may include a hard disk, removable media (*e.g.*, recordable DVD), or solid state or flash memory. *Id.*, 27:36-51, 33:20-35:50, 76:6-34, 94:15-20, Fig. 3; Ex. 1002, ¶¶ 124-25.

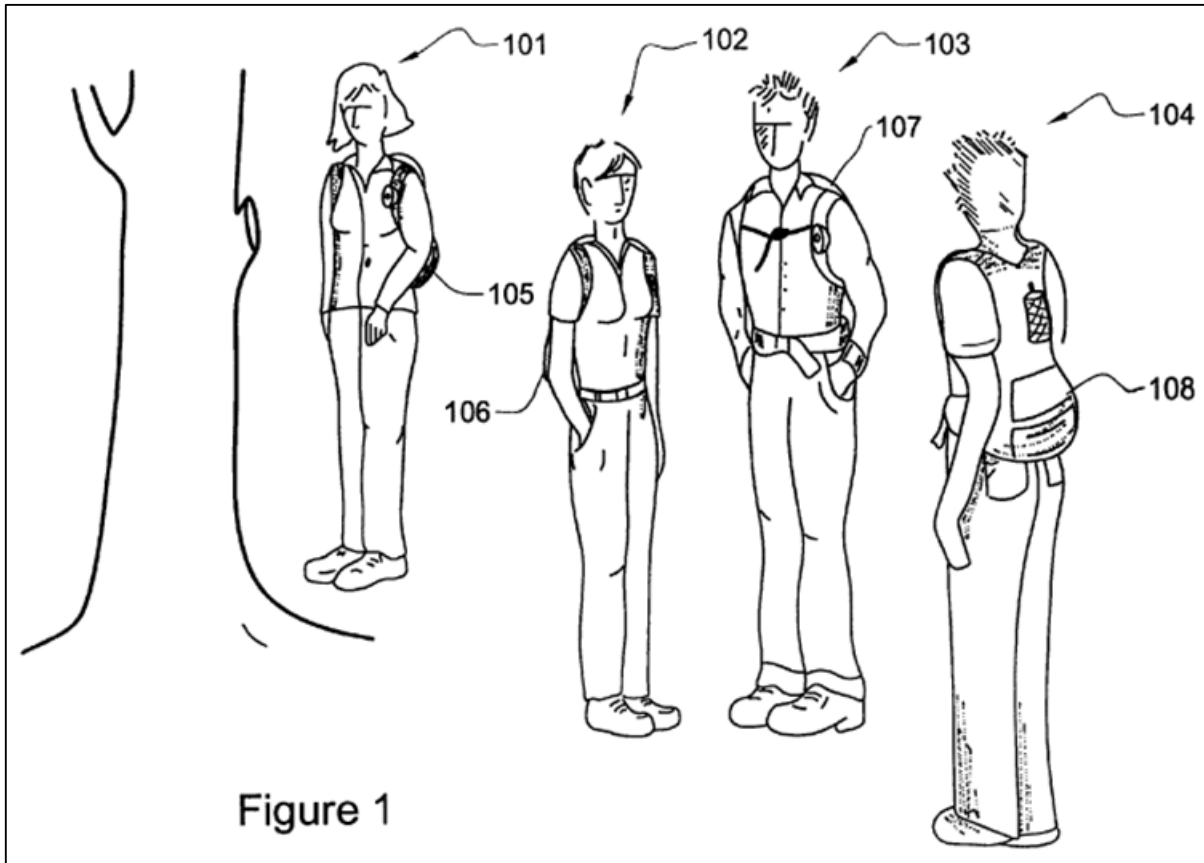
(6) **1[E]: “at least one local transmitter;”**

The Lectrosonics IPR Board found that Strub teaches that the local audio device wirelessly transmits the locally generated audio to a remote recorder. Zaxcom is collaterally estopped from disputing that finding. *Supra* § VI.C.

Strub’s recording unit includes a local transmitter 309 for wirelessly transmitting audio to the other recording units:

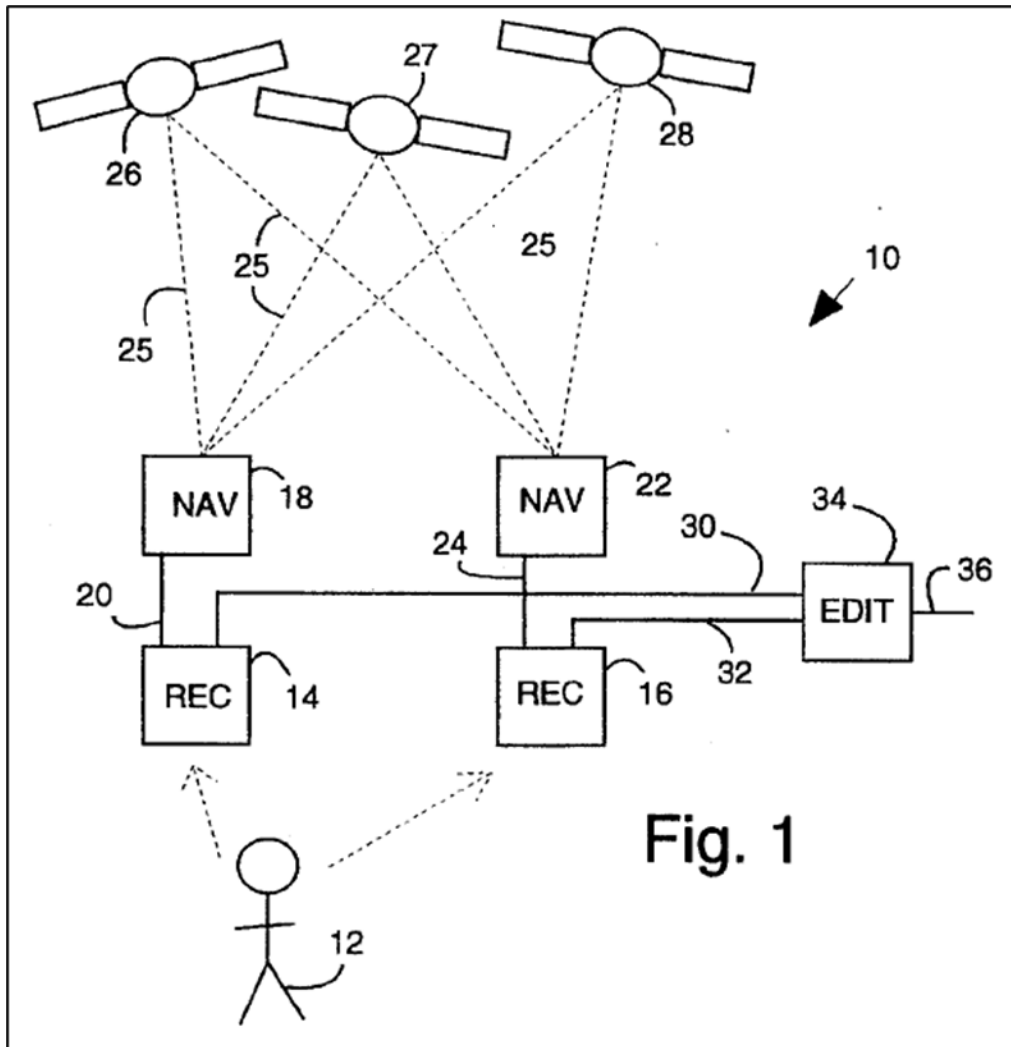


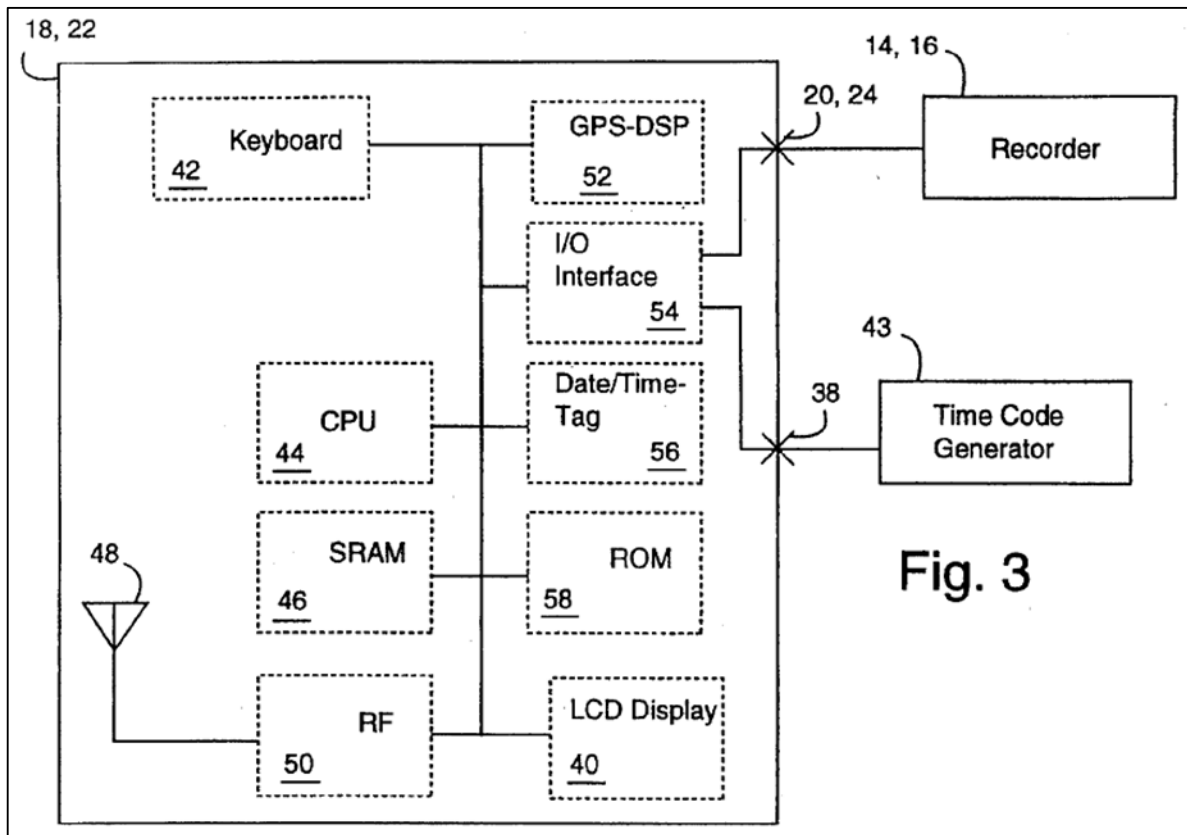
Ex. 1003, Fig. 3 (annotated).



Id. Fig 1. See also *id.* 12:31-46, 35:51-36:29 (“transmitter that enables...the recording data ... to be broadcast from the recording unit”).

Woo’s local audio device—*e.g.*, an arrangement comprising recorder 14/16 and GPS receiver 18/22—transmits locally generated audio (in one example, wirelessly) to the remote recorder—editing station 34:





Ex. 1004, Figs. 1, 3; *id.* 5:37-49 (“[Fig. 1] connections 30 and 32 represent the communication of the respective recordings by...radio link...to the editing station 34.”), 8:32-44, 9:40-43, 9:56-63, Fig. 4. A POSA would have understood that Woo’s “radio link” necessarily would have required at least one local transmitter in the recorder 14/16. Ex. 1002, ¶¶ 129-30.

(7) **1[F]: “at least one local receiver; and”**

The Lectrosonics IPR Board found that Strub discloses a “local audio device receiver,” which Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

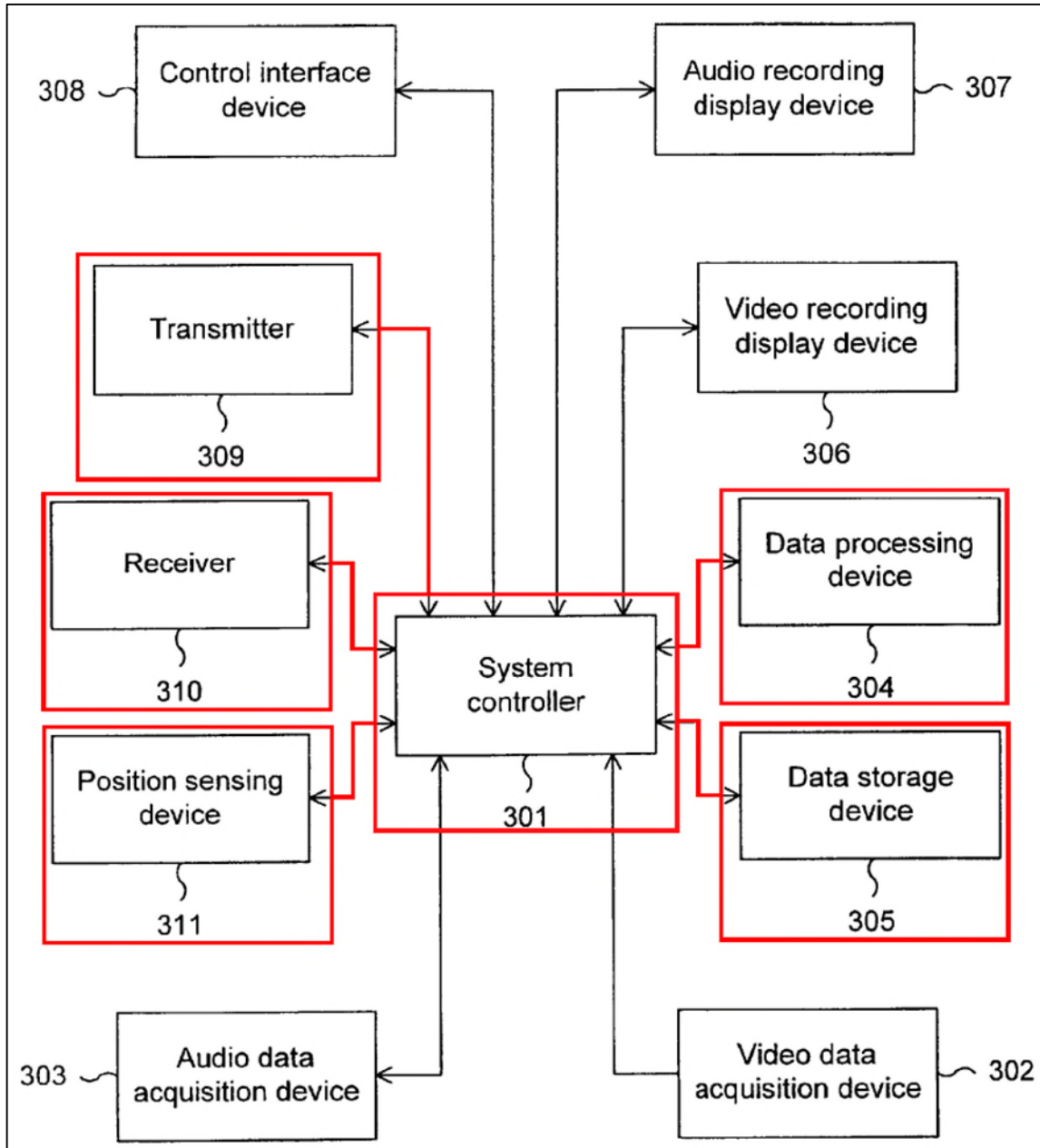
In particular, position sensing device 311 in Strub’s local audio device comprises a “GPS receiver.” Ex. 1003, 62:26-63:49, Fig. 3. In addition, each of Strub’s local audio devices includes local receiver 310, which “receives...recording data acquired by...other recording units.” *Id.* 12:4-10, 12:39-43, 35:57-62, Fig. 3; *see generally id.* 35:53-38:39 (“Communication Between Recording Units”). Strub also describes “transmitting a synchronization pulse from a ‘master’ recording unit to each of the other recording units.” *Id.* 38:29-39. In view of Strub’s description of using the transmitters and receivers of the respective recording units to allow them to communicate with each other, *id.*, 35:53-38:39, a POSA would understand that recording units receive the synchronization pulses through their receivers 310.

Woo’s local audio device also has a GPS receiver which receives time information from GPS satellites 26-28. Ex. 1004, Abstract, 4:13-19 (“GPS navigation receiver...for communicating [SMPTE] time codes”), 4:45-48, 5:5-10 (“satellite receiver[s] 18[/22] provide[.]...date and time information to...recorder[s] 14[/16]”), 5:21-29 (“time clock information” from satellites), 5:54-67, 7:18-25, 7:26-47, 7:48-8:59, 8:60-9:19, 9:33-39, 9:45-55, 10:15-64, Figs. 2-6 (“GPS Receiver” 122/142); Ex. 1002, ¶ 133.

(8) **1[G]: “at least one local processing unit, the at least one local processing unit operatively coupled to the at least one local memory, and, optionally, the at least one local transmitter and, optionally, the at least one local receiver”**

The Lectrosonics IPR Board found that Strub teaches “at least one control unit electrically coupled to said local audio device receiver... [and] said memory,” so Zaxcom is collaterally estopped from disputing that finding. *Supra* § VI.C.

Strub’s local audio devices—recording units 105-108—include a local processing unit—*e.g.*, system controller 301 and/or data processing device 304—operatively coupled to the local memory (data storage device 305), the local transmitter 309, and the local receivers (receiver 310; GPS-based position sensing device 311):



Ex. 1003, Fig. 3 (annotated); *id.* 12:4-13, 13:36-14:13 (operation of “system controller”).

(9) **1[H]: “wherein the at least one local memory stores instructions that, when executed by the at least one local processing unit, configures the local audio device to: receive the at least one master timecode from the remote receiver via the at least one local receiver; ”**

Strub’s local memory—data storage device 305—stores instructions—*e.g.*, one or more computer programs. Ex. 1003, 14:4-13 (“computer programs [for the system controller]...are stored on a data storage device of the recording unit....”). A POSA would understand that the instructions are executed by, and control, the at least one local processing unit—*e.g.*, system controller 301 and/or data processing device 304. Ex. 1002, ¶ 137. In addition, the system controller “controls the operation of other components of the recording unit and mediates interaction among those components to effect performance of the functions of the recording unit.” Ex. 1003, 13:37-41. Thus, a POSA would understand that the instructions, when executed by the at least one local processing unit, configure Strub’s local audio device to perform the functions in Strub, including receiving the synchronization pulses—*i.e.*, master timecodes, *see supra* 1[A]—from the remote receiver—*e.g.*, the master recording unit. *Id.* 38:29-39 (synchronizing recordings “by transmitting a synchronization pulse from a ‘master’ recording unit to each of the other recording units....”). More particularly, since the system controller 301 is the only component connected to the receiver 310, *id.* Fig. 3, and since the system controller “controls the operation of other components of the recording unit,” *id.* 13:37-41, a POSA

would understand that the system controller 301 configures receiver 310 to receive the master timecodes for recording device 300. Ex. 1002, ¶ 137.

Furthermore, Strub’s “system controller can include a clock.” Ex. 1003, 13:52-53. A POSA would understand that, to synchronize the clock, the system controller in the local audio device would receive the master timecodes—*e.g.*, synchronization pulses—from the remote receiver via the local receiver 310. Ex. 1002, ¶ 138.

(10) **1[I]: “create time-referenced local audio data from the locally generated audio and the at least one master timecode;”**

The Lectrosonics IPR Board found that Strub teaches “creating stamped local audio data,” a finding Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

For example, Strub’s local audio device receives at least one synchronization pulse—*i.e.*, master timecode—from the remote receiver. *See supra* 1[A]. Strub’s synchronization pulses would synchronize the local clock in the local audio device. Ex. 1002, ¶ 140. Strub’s local audio device uses its synchronized local clock to “time-stamp”—*i.e.*, time-reference—the local audio data, creating time-referenced local audio data. Ex. 1003, 13:52-58 (“[T]he system controller can include a clock that is used to time-stamp the recording data obtained by the recording unit....”). Since the time references are created using a local clock synchronized from the

master timecode, the time-referenced local audio data has been created from the locally generated audio and the at least one master timecode.

In addition, Strub discloses creating time-referenced local audio data by adding GPS time stamps, which are also master timecodes, to the locally generated audio. *Id.* 63:12-49 (using “GPS time signal” to “generate time-stamps for the recording data”); *see also id.* 6:65-7:24; 29:42-62, 77:24-28; 78:7-40; 84:20-25; Ex. 1002, ¶ 141.

Woo also teaches this element. Woo’s local audio device includes “a date and time tag unit 56,” Ex. 1004, 7:59, Fig. 3, that provides time stamps, which comprise master timecodes and are used to stamp at least a portion of the local audio data. *Id.*, 8:11-21, 8:25-44, Figs. 3, 4; *see also id.* 1:60-2:1, 5:37-45. The time stamps/timecodes can be based on GPS signals from GPS receivers 18/22 or provided by “commercially-available time code generator 43.” *Id.* 4:13-19 (SMPTE timecodes based on GPS timing signals), 4:45-48 (GPS), 5:5-13, 7:26-29, 7:29-35 (timecodes from “commercially-available time code generator 43”), 7:49-53 (time code generator “can be used as a master clock.”), 8:25-36 (tagging recording with date/time information from satellite receiver), 9:33-39, 10:44-60, Figs. 2-4; Ex. 1002, ¶ 142.

(11) **1[J]: “store the time-referenced local audio data in the at least one local memory; and ”**

The Lectrosonics IPR Board found that Strub teaches storing the locally generated audio as audio data in the memory of the local audio device. Zaxcom is collaterally estopped from disputing that finding. *Supra* § VI.C.

System controller 301 in Strub’s local audio device stores the audio as time-referenced local audio data in the local memory—*i.e.*, data storage device 305—by storing the local audio data together with the corresponding time-stamps. Ex. 1003, 12:10-21 (“[A]udio recording data...can be stored directly in the data storage device 305.”), 6:65-7:24 (establishing “temporal correspondence” by storing a “time code on the videotape”), 29:42-62 (recording time codes with the audio/video data), 77:24-28 (“writ[ing] a time code to the linear data storage medium...indicating the time at which corresponding recording data was obtained.”), 78:7-40 (storing timecodes on videotape), 13:50-58 (“time-stamp the recording data”), 63:41-60, Fig. 3.

Woo’s system stores the locally generated audio in the local memory as “time-tagged”—*i.e.*, time-referenced—local audio data. Ex. 1004, 4:62-64, 5:1-5 (recorders 14/16 “capture” performance), 5:37-45 (“recordings” stored within recorders 14/16); *supra* 1[Pre] (audio data time-tagged by Woo’s date/time-tag unit 56); Ex. 1002, ¶ 145.

(12) **1[K]: “wherein the audio data is transmitted to the remote receiver substantially simultaneously with the receiving of the local audio data by the local audio device, the creating of the time-referenced local audio data, or the storing of the time-referenced local audio data in the at least one local memory.”**

Strub’s local audio device—*e.g.*, recording unit 300—receives the local audio data, creates and stores the time-referenced local audio data in the local memory—data storage device 305—and transmits the audio to a remote device—one or more of the other recording units, *e.g.*, 105-108. *See supra* 1[Pre], Elements 1[A], 1[B], 1[E], 1[I], 1[J]. The transmission is sent to the remote device at the same time that the recording is “being obtained” by the local device—*i.e.*, substantially simultaneously with the local device’s receiving the audio “during the event.” *See supra* 1[Pre], Ex. 1003, 35:61-65.

Woo also teaches this element. Woo’s local audio device—comprising recorder 14/16 and GPS receiver 18/22—receives the local audio data, creates and stores the time-referenced local audio data in the local memory, and transmits the locally generated audio to the remote receiver—editing station 34. *See supra* 1[Pre], Elements 1[A], 1[B], 1[E], 1[I], 1[J]. Woo teaches that the transmission can be done in real time—*i.e.*, at the same time as the receiving of the local audio data and creation and storage of the time-referenced local audio data in the local memory. *See supra* 1[Pre]; *see also* Ex. 1004, 8:51-54 (combining/generating in “*real-time*” with performance), 10:7-10; Ex. 1002, ¶ 147.

b. **Claim 2: “A system according to claim 1, wherein the local audio device is in the form of a body pack”**

Strub’s local audio device can be a body pack—*e.g.*, a backpack or pack worn on the recorder’s body. Ex. 1003, 11:11-17 (“[T]he recording unit [is] mounted on (*e.g.*, attached on, or worn by)...the recorder”), 16:49-65 (backpack), 22:3-7, 66:52-56, 70:52-67, 71:53-66 (attached to body with waist strap), 73:24-50 (harness, backpack), Figs. 1, 4, 6, 8A-9B (depicting body packs); Ex. 1002, ¶ 148.

c. **Claim 3: “A system according to claim 1, wherein the local audio device is in the form of a body pack typically worn by news announcers and performers.”**

This element is disclosed by Strub, which teaches a body pack. *Supra*, claim 2. Additionally, to the extent Claim 3 is definite, Strub teaches that the recording unit (local audio device) is in a form typically worn by a “performer,” *i.e.*, a “participant” in an event. *See* Ex. 1003, 8:7-29 (recording units are for “people ... participating in ... an event”), 11:1-9 (“... the recorder’s participation in the event ...”), Abstract, 1:24-35. For instance, the person wearing Strub’s recording unit can record the event while also singing “Happy Birthday” as a participant. *Id.* 52:19-24. *See also id.* 67:59-68:2 (“recording while engaging in an athletic activity...”), 2:55-65, 47:33-39.

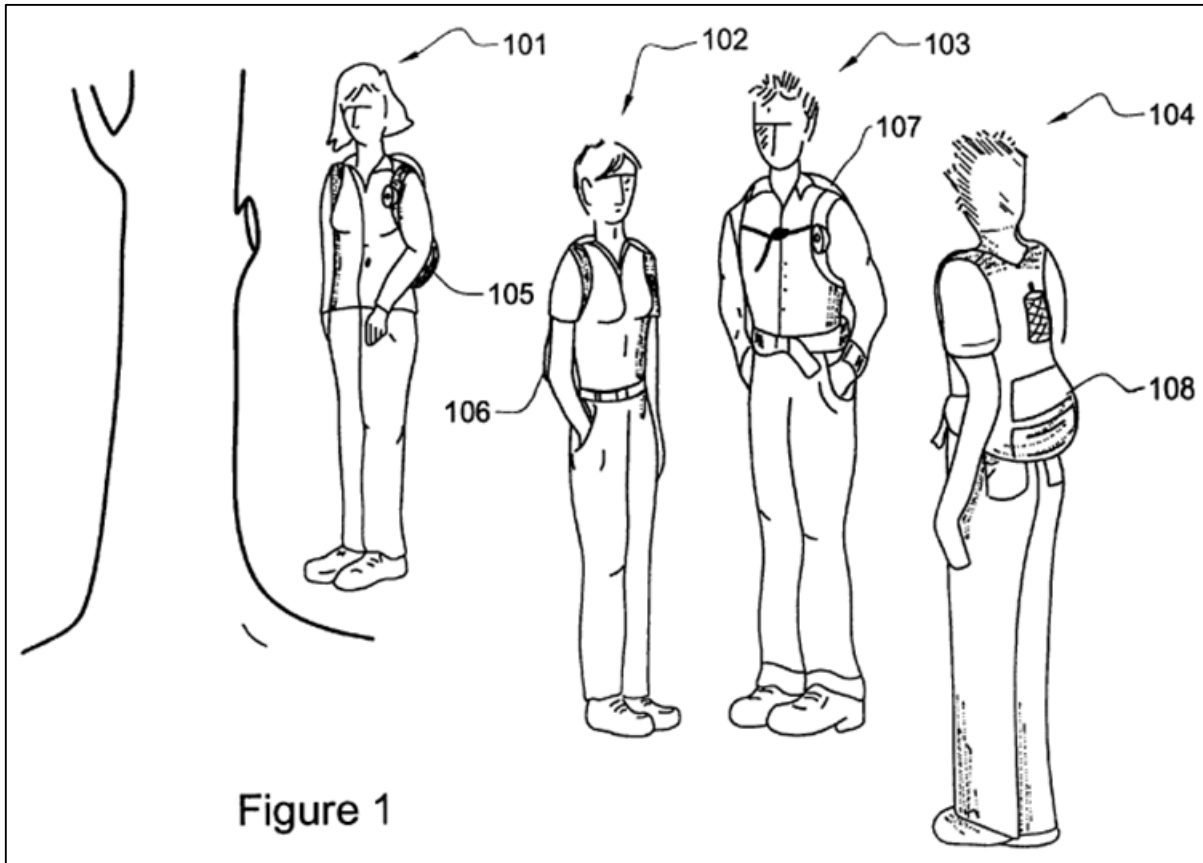


Figure 1

To the extent Claim 3 is definite, Strub’s recording unit also can be in a form typically suitable for news announcers. For instance, Strub teaches that it should be “wearable,” “small,” “lightweight,” “inconspicuous,” “unobtrusive,” “operate[s] easily,” facilitates “low-attention recording,” and does “not physically interfere (e.g., obstruct vision or movement) with the recorder’s participation in the event.” *Id.* 4:20-31, 9:4-33, 11:1-24, 23:58-67, 34:12-15. These are physical characteristics that make the form of Strub’s wearable body pack typically suitable for news announcers; therefore, a POSA would understand that Strub either teaches this element or renders it obvious. See Ex. 1002, ¶ 150.

- d. **Claim 4: “A system according to claim 1, wherein the at least one master timecode includes hour data, minute data, second data, SMPTE timecode, or combinations thereof.”**

The Lectrosonics IPR Board found that Strub teaches master time data including hour, minute, and/or second data. Zaxcom is collaterally estopped from disputing that finding. *Supra* § VI.C.

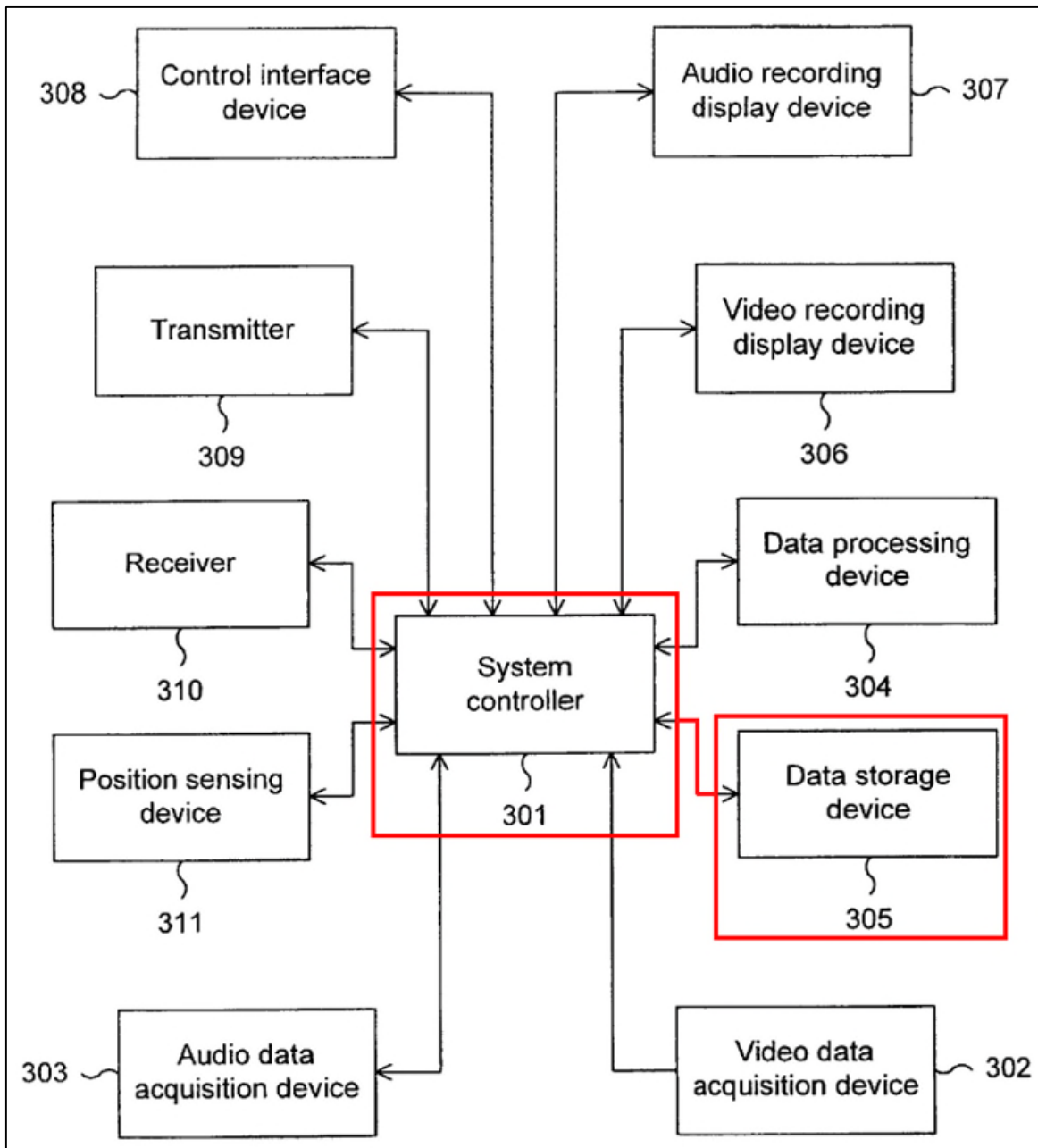
Strub teaches master timecodes from a SMPTE timecode source. Ex. 1003, 75:47-51. A POSA would know that SMPTE timecodes contain hour, minute, and second data. Ex. 1002, ¶ 152 (citing Ex. 1037, 30-35; Ex. 1039, 2-3, 6, 13); *see also* Ex. 1004, 3:20-22 (“Twenty-six [bits of a SMPTE timecode] used to store time information”). Strub also teaches the use of GPS time signals as master timecodes. *See supra* Elements 1[A], 1[H], 1[I]. Strub explains that the “GPS time signals” “represent[] the current time,” Ex. 1003, 63:41-49, which a POSA would understand includes second data—*e.g.*, the number of seconds since the beginning of the current GPS week. Ex. 1040, 1:47-60 (“GPS time is stated in terms of a time of week (TOW) and a week number. TOW ranges from 0 to 604800, corresponding to the number of seconds in a week.”); Ex. 1002, ¶ 152.

Woo’s timecode generator 43 and CPU 44 running the timecode-generation program stored in ROM 58 both generate SMPTE timecodes which include hour, minute, and second data. *See supra* Element 1[Pre]; Ex. 1004, 1:21-40 (time code

clock provides data “in hours, minutes, seconds and frames”), 2:3-9, 2:42 (time codes include “time bits”), 3:20-22 (“Twenty-six [bits of a SMPTE timecode] used to store time information.”); Ex. 1002, ¶ 153.

- e. **Claim 5: “A system according to claim 1, wherein the remote receiver is configured to communicate with a recording device.”**

Strub’s remote receiver—*e.g.*, the master recording unit 300, *see supra* Element 1[A]—is configured to communicate with a recording device, including its own internal recording device—data storage device 305—through its system controller 301, as illustrated in Figure 3:



See Ex. 1003, 12:10-21 (“[T]he system controller 301 controls the operation of, and mediates interaction among, the other components of the recording unit 300,” including data storage device 305); *see also id.* 6:14-15 (recording unit has “non-volatile data storage device on which recording data is stored”), 6:16-53, 7:14

(videotape recording device), 11:37-53 (recording unit 200 stores audio/video in data storage device 203), 13:36-14:7, 27:36-28:14 (hard disk or non-volatile data storage), 29:19-23, 33:20-56, Fig. 2 (system controller 201 configured to communicate with data storage device 203).

Alternatively, a POSA would have considered it obvious to take Strub's recording unit (data storage device 305) out of the remote receiver (local recording unit 300), provide it with its own enclosure, and have the remote receiver communicate with it using an external interface. For instance, Strub teaches that the recording unit 300 can be used with "existing camcorders" connected via "an external communication port." *Id.* 5:23-48, 48:45-47, 70:6-57. More generally, Strub teaches connecting "additional devices" to a recording unit via wires and ports or wirelessly. *Id.* 66:7-25, 67:30-44, 70:40-43. Furthermore, taking Strub's recording unit out of the remote receiver, putting it in its own enclosure, and having the remote receiver communicate with it using an external interface would involve merely a simple rearrangement of parts and thus would have had a high likelihood of success. Ex. 1002, ¶ 155.

Woo's remote receiver—editing station 34—can be a "telecine suite or an audio [p]layback suite." Ex. 1004, 5:36-42. A POSA would understand that an "audio playback suite"—a well-known term in the recording industry—comprises post-processing and recording equipment, and that the respective devices in the suite

communicate with each other. Ex. 1002, ¶ 156. Furthermore, a POSA would have considered it a routine design choice whether to include the recording device within Woo's editing station 34 or as an external recording device with which the remote receiver separately communicates, with each having a high likelihood of success. *Id.* .

- f. **Claim 6: “A system according to claim 5, wherein the recording device is a multi-track recorder, a personal computer, a cellular phone, or a camera.”**

Strub's recording device is a camera—*e.g.*, a camcorder, video cassette recorder, or portable dockable videotape recorder. *See supra* Claim 5; Ex. 1003, 5:23-48, 48:45-47, 66:7-25, 67:30-44, 70:6-57, 70:40-43, 75:25-57.

- g. **Claim 7: “A system according to claim 1, wherein the remote receiver is a master timecode generator.”**

Claim 7 does not narrow Claim 1, which already requires the remote receiver to create at least one master timecode. In any event, Claim 7 is disclosed by each of Strub and Woo for the reasons set out *supra* Element 1[A]; Ex. 1002, ¶ 158.

- h. **Claim 9: “A system according to claim 1, wherein the time-referenced local audio data is configured to facilitate synchronization of the time-referenced local audio data and the remotely recorded audio data.”**

Strub's time-stamped—*i.e.*, time-referenced—local audio data, *supra* Element 1[I], is configured to facilitate synchronization of the time-referenced local audio data and the remotely recorded audio data. The system controller 301 in

Strub's local audio device "time-stamp[s] the recording data obtained by the recording unit. (The time-stamps can be used...to enable post-event synchronization of the display of recordings obtained by different recording units.)" Ex. 1003, 13:50-58; *see also id.* 79:54-80:9 ("temporally synchronize multiple recordings of the same event that were simultaneously obtained by different recording units"), 84:5-25 (using "time codes" to "enabl[e] the delays between recording units to be calculated."), 38:29-39. A POSA would understand that Strub's references to synchronizing "recordings obtained by different recording units" include both the local recordings created by the respective recording units and the remote recordings received by recording units acting as remote receivers. Ex. 1002, ¶ 159.

Woo's time-stamped—*i.e.*, time-referenced—local audio data, *supra* Element 1[I], is configured to facilitate synchronization of the time-referenced local audio data captured by the local audio devices and the remotely recorded audio data stored at the editing station 34. For example, Woo's "time code information is input to independent...recorders...to create tracks on each recording for re-synchronizing...in post-performance editing." Ex. 1004, Abstract; *see also id.* 1:60-2:9 (time codes "useful in the editing process...."), 2:39-48, 4:3-32, 4:62-64 ("time-keeping system for synchronizing" recordings). In addition, Woo teaches using software and timecode information (*i.e.*, "first and second date and time code information") to synchronize and "blend" two different recordings from different

microphones to generate a third, composite recording “from the date and time synchronized portions.” *Id.* 8:44-52, 11:12-16 (same), 9:65-10:5, 12:11-14. Woo provides alternative examples in which the combining is done in post-processing or in real time. *See id.*, 8:51-54, 10:7-10, 10:12-14. Moreover, Woo teaches synchronizing clocks of recording units so that recordings can later be combined by aligning time stamps. *See id.*, 3:38-67. *See also* Ex. 1002, ¶ 160.

i. **Claim 10: “A system according to claim 1 further comprising: a remote control unit.”**

Strub’s system comprises a remote control unit—a “control interface device” or “control interface unit 702”—which can be “implemented to enable wireless communication...between the control interface device...and the remainder of the recording unit[s].” Ex. 1003, 47:41-48, 68:11-18, Fig. 7. “[T]he control interface device enables the recorder to control operation of the recording unit.” *Id.*, 47:49-53; *see also id.* 45:52-46:5, 47:50-63, 48:4-17, 49:4-14, 49:22-31, 49:46-55, 57:25-32. Strub teaches that the control interface device is remote and separate from the recording unit. *Id.* 47:25-32, 46:18-24, 46:54-56, 47:2-9. For example, a “transmitting recording unit” can send signals to one or more “receiving recording unit[s]” to cause the receiving recording units to “emi[t] an audible tone, display...a visual cue (*e.g.*, lighting of an LED indicator) and/or produc[e] a haptic sensation...” *Id.* 40:45-60; *see also* Ex. 1002, ¶ 161.

j. **Claim 13.**

Claim 13 has mostly the same limitations as '814 Patent Claim 37, which was found unpatentable in the Lectrosonics '1130 IPR, except Claim 13 adds substantially simultaneously transmitting audio data to a remote device. Ex. 1001, Claim 13; Ex. 1028, Claim 37, IPR Certificate at 1:6-7. However, transmitting audio data to a remote device was present in Claim 13 of the '307 Patent, which was found unpatentable in the Lectrosonics '972 IPR. Ex. 1015, Claims 12, 13, IPR Certificate at 1:5.

(1) **13[Pre]: “A system for locally recording locally generated audio as time-referenced local audio data and for substantially simultaneously transmitting audio data to a remote device, the system comprising: ”**

Regardless of whether the preamble of Claim 1 is limiting, it is taught by Strub and Woo. *See supra* 1[Pre].

(2) **13[A]: “a remote receiver, the remote receiver configured to create at least one master timecode and to receive audio data; ”**

Taught by Strub and/or Woo. *Supra* 1[A].

(3) **13[B]: “a local audio device capable of communicating with the remote receiver and configured to receive locally generated audio; ”**

Taught by Strub and Woo. *Supra* 1[B].

(4) **13[C]: “the at least one local audio device wearable by a creator of the locally generated audio, ”**

Taught by Strub. *Supra* 1[C].

(5) **13[D]: “the at least one local audio device including: at least one local memory;”**

Taught by Strub. *Supra* 1[D].

(6) **13[E]: “at least one local transmitter;”**

Taught by Strub and Woo. *Supra* 1[E].

(7) **13[F]: “at least one local receiver; and ”**

Taught by Strub and Woo. *Supra* 1[F].

(8) **13[G]: “at least one local processing unit, the at least one local processing unit operatively coupled to the at least one local memory, and, optionally, the at least one local transmitter and, optionally, the at least one local receiver,”**

Taught by Strub. *Supra* 1[G].

(9) **13[H]: “wherein the at least one local memory stores instructions that, when executed by the at least one local processing unit, configures the local audio device to: receive the at least one master timecode from the remote receiver via the at least one local receiver;”**

Taught by Strub. *Supra* 1[H].

(10) **13[I]: “synchronize a local timecode with the at least one master timecode;”**

The Lectrosonics IPR Board found that Woo discloses synchronizing a local clock with a master time clock and that a POSA would have been motivated to use Woo’s synchronization techniques in Strub’s system—findings Zaxcom is collaterally estopped from disputing. *Supra* § VI.C.

Strub discloses that master timecodes comprising a “synchronization pulse” are used to synchronize other “devices.” Ex. 1003, 38:29-39. A POSA would

understand that synchronizing “devices” entails synchronizing the devices’ clocks, and thus that the master timecode is used to synchronize the other recorders’ local clocks so that the local timecodes generated by those clocks are synchronized with the master timecode. At minimum this would have been an obvious way to accomplish such synchronization and, since clock synchronization and timecode generation were well-understood, would have had a high likelihood of success. Ex. 1002, ¶ 173.

Alternatively, Strub discloses using GPS time as master timecodes. *Supra*, element 1[A]. Strub also has a local clock for generating local timecodes and timestamping audio. Ex. 1003, 13:52-54, 63:56-60, 79:54-80:9, FIG. 3. Strub states that “the recording unit need only be exposed to a GPS satellite for about a minute to enable time signals to begin ... after that point, clock drift occurs slowly, even if the recording unit is blocked from the GPS satellites for a period of time.” *Id.* 63:50-60. To a POSA, this means that the GPS master timecodes, when they can be received, are used to synchronize the local clock and thereby the local timecodes. When the GPS signals are blocked, the local clock and timecodes drift until the GPS signal can be reacquired and the local clock synchronized again. Ex. 1002, ¶ 174.

Furthermore, a POSA would have considered it a routine and obvious design choice whether to use Strub’s GPS or SMPTE master timecodes or Strub’s synchronization pulses—which also comprise master timecodes, *see supra* 1[A]—

to synchronize the local timecode generator and thus the local timecodes. *See e.g.*, Ex. 1003, 75:25-57 (“SMPTE time code input ... to enable synchronization with an external device”); Since timecode-generator synchronization was well understood, any of those choices would have had a high likelihood of success. Ex. 1002, ¶ 175.

Woo also teaches this element. Woo discloses receiving a master timecode from a master timecode generator—*e.g.*, GPS satellites 26-28—and synchronizing the local timecode generator 43 to the satellite(s) using the master timecode. Ex. 1004, 3:37-45 (describing synchronization process), 4:13-19 (“a GPS navigation receiver...for communicating time codes in SMPTE format”; combining GPS date/time “with a highly-accurate one pulse-per-second...to form a time-keeping base for the time code output.”), 4:45-48, 5:5-10 (using “highly-accurate date and time information” from “[a] navigation satellite receiver”), 5:21-29 (“navigation satellite receivers 18 and 22” receiving GPS satellite data; “Each satellite 26-28 has an atomic clock synchronized system-wide to provide highly accurate time clock information.”), 5:54-67, 7:18-25, 7:26-47 (“commercially-available time code generator 43...will jam [synchronize] to both the output connection 38 and normal SMPTE/EBU time code”), 7:49-8:59, 8:60-9:4, 9:5-19, 9:33-39, 9:45-55, 10:15-64, Figs. 2-4; Ex. 1002, ¶ 176.

(11) **13[J]: “create time-referenced local audio data from the at least one local timecode;”**

The Lectrosonics IPR Board found that Strub teaches a “local timecode generator for creating stamped local audio data and storing said stamped local audio data in said memory.” Zaxcom is collaterally estopped from disputing that finding. *Supra* § VI.C.

System controller 301 in Strub’s local audio device creates time-referenced local audio data by time-stamping the locally generated audio with local timecodes generated by a local clock. Ex. 1003, 13:50-58 (“[T]he system controller can include a clock that is used to time-stamp the recording data obtained by the recording unit.”), 63:56-60 (“internal clock...to accurately time-stamp data”), 6:65-7:24, 29:42-62, 77:24-28, 78:7-40; 84:20-25; Ex. 1002, ¶ 178.

(12) **13[K]: “store the time-referenced local audio data in the at least one local memory; and ”**

Taught by Strub and Woo. *Supra* 1[J].

(13) **13[L]: “wherein the audio data is transmitted to the remote receiver substantially simultaneously with the receiving of the local audio data by the local audio device, the creating of the time-referenced local audio data, or the storing of the time-referenced local audio data in the at least one local memory.”**

Taught by Strub and Woo. *Supra* 1[K].

k. **Claim 14: “A system according to claim 13, wherein the local audio device is in the form of a body pack.”**

Taught by Strub. *Supra* Claim 2.

- l. **Claim 15: “A system according to claim 13, wherein the local audio device is in the form of a body pack typically worn by news announcers and performers.”**

Taught by Strub. *Supra* Claim 3.

- m. **Claim 17: “A system according to claim 13, wherein the at least one master timecode and the at least one local timecode include hour data, minute data, second data, SMPTE timecode, or combinations thereof.”**

Taught by Strub and Woo. *Supra* Claim 4.

- n. **Claim 18: “A system according to claim 13, wherein the remote receiver is configured to communicate with a recording device.”**

Taught by Strub and Woo. *Supra* Claim 5.

- o. **Claim 19: “A system according to claim 18, wherein the recording device is a multi-track recorder, a personal computer, a cellular phone, or a camera.”**

Taught by Strub. *Supra* Claim 6.

- p. **Claim 20: “A system according to claim 13, wherein the remote receiver is a master timecode generator.”**

Taught by Strub and Woo. *Supra* Claim 7.

- q. **Claim 22: “A system according to claim 13, wherein the time-referenced local audio data is configured to facilitate synchronization of the time-referenced local audio data and the remotely recorded audio data.”**

Taught by Strub and Woo. *Supra* Claim 9.

- r. **Claim 23: “A system according to claim 13 further comprising: a remote control unit.”**

Taught by Strub. *Supra* Claim 10.

- s. **Claim 27: “A system according to claim 13, wherein the synchronize a local timecode with the at least one master timecode is done by synchronizing a local timecode generator to the master timecode, or synchronizing a local timecode to the master timecode.”**

Each of Strub and Woo teaches both synchronizing a local timecode generator to the master timecode and synchronizing a local timecode to the master timecode. *See supra* 13[I].

B. Ground 2: Claims 12 and 26 are Rendered Obvious Under § 103 By the Combination of Strub, Woo, Nagai, and Gleissner

1. A POSA Would have Been Motivated to Combine Strub, Woo, Nagai, and Gleissner

A POSA would have been motivated to combine Strub and Woo, *supra* § IX.A.1, and to combine Nagai and/or Gleissner with Strub and Woo. Indeed, in the Lectrosonics IPRs, the PTAB found that a POSA would have considered it obvious to combine these. *See supra* VI.C. Zaxcom is collaterally estopped from disputing those findings. *Id.*

There was substantial motivation to combine Strub, Woo, Nagai, and Gleissner. For example, Nagai and Gleissner teach audio recording systems having an audio input—a “mike jack” or XLR plug connector—configured to couple to an audio input device for receiving locally generated audio. Ex. 1005, [0100], [0109]-[0110], [0139], Fig. 1, 2A; Ex. 1006, [0013], [0024], [0032], Fig. 1. Audio plugs and jacks such as those in Nagai have existed essentially unchanged since the 19th

century. *See, e.g.*, Ex. 1023; Ex. 1024. XLR connectors such as those referenced in Gleissner were so common as of the '444 Patent's priority date that they had been standardized. Ex. 1025 at 1 (standard date March 2004). A POSA would have considered it obvious to use those well-known, standard connectors in Strub's local audio device because of their popularity, especially since Strub recommends specific commercially-available microphones—*e.g.*, a Sanken CSS-5—which plugged into a standard XLR jack. Ex. 1003, 25:35-49; Ex. 1026 at 6, 14 (XLR-5 "IN/OUT" connection), *passim* (XLR-connected microphones); Ex. 1027, at 7 (XLR-5 "IN/OUT" connection), *passim* (XLR-connected microphones); Ex. 1002, ¶ 191.

Furthermore, every element of Challenged Claims 12 and 26 appears in Strub, Woo, Nagai, and/or Gleissner. *See infra* § IX.B.2. Those elements comprise well-known, off-the-shelf audio-recording and components that would be familiar to any POSA and predictable to use in a wireless audio-recording system. Ex. 1002, ¶ 192. Furthermore, such components were well-understood in the relevant time such that their combination would have had a high likelihood of success. *Id.*

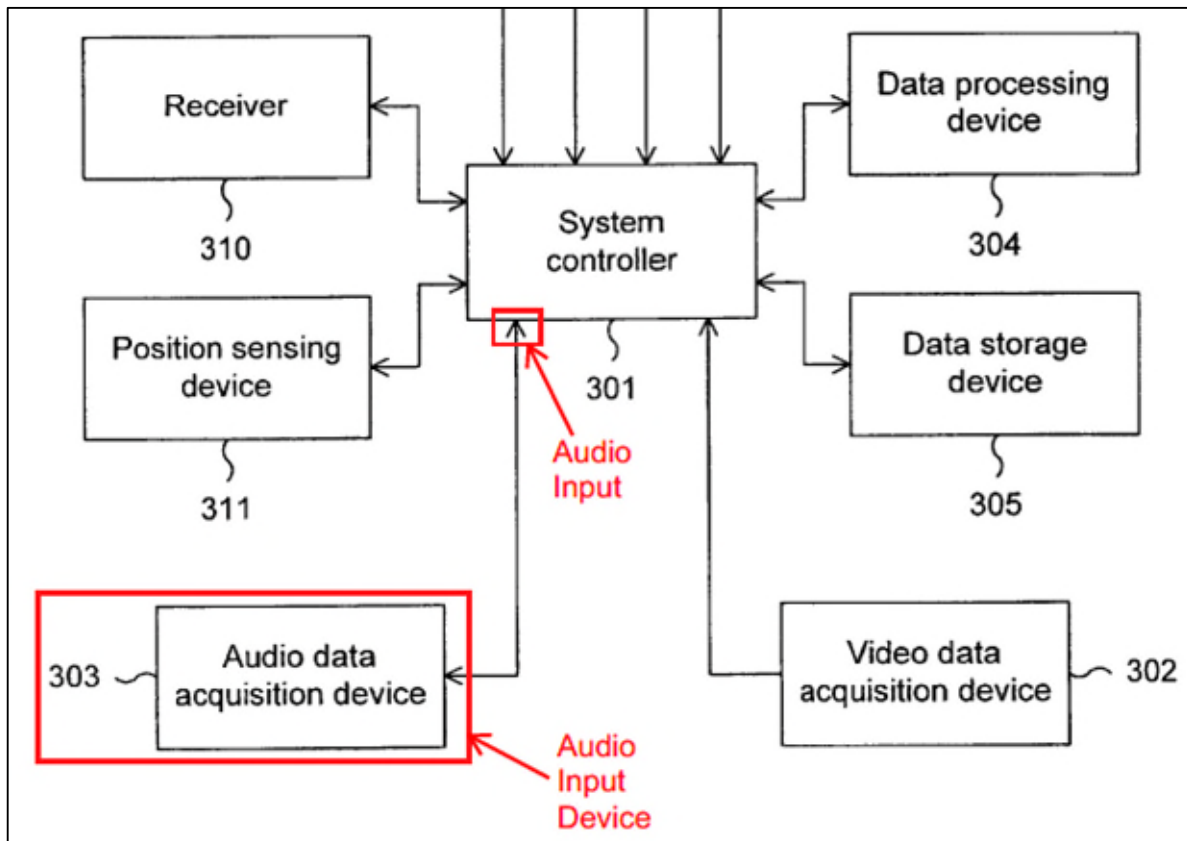
Since Nagai's and Gleissner's microphone jacks and plugs were old elements performing familiar functions, the recitation of these elements in the Challenged Claims is merely "the predictable use of prior art elements according to their established functions," and the combination of Strub, Woo, Nagai, and Gleissner would have had a high likelihood of success.

2. **The Combination of Strub, Woo, Nagai, and Gleissner Meets All Elements of Challenged Claims 12 and 26**
 - a. **Claims 12 and 26: “A system according to claim [1/13], the local audio device further comprising: at least one audio input configured to receive the local audio data.”**

The Lectrosonics IPR Board found that each of Strub, Nagai, and Gleissner teaches an “audio input port for receiving said locally generated audio from an audio input device,” and that it would have been obvious to combine Strub with Nagai or Gleissner. *Supra* § VI.C. Zaxcom is collaterally estopped from disputing those findings. *Id.*

Strub’s audio data acquisition device 303 is an audio input device, a microphone. Ex. 1003, 21:65-22:2 (“microphone” a “suitable audio data acquisition device”); 22:64-23:31 (microphone audio input devices), 25:25-49, 60:3-5 (“conventional microphone”). Strub’s exemplary microphones include digital microphones. *Id.* 21:65-22:2. A POSA would understand that a digital microphone outputs audio data. Ex. 1002, ¶ 195.

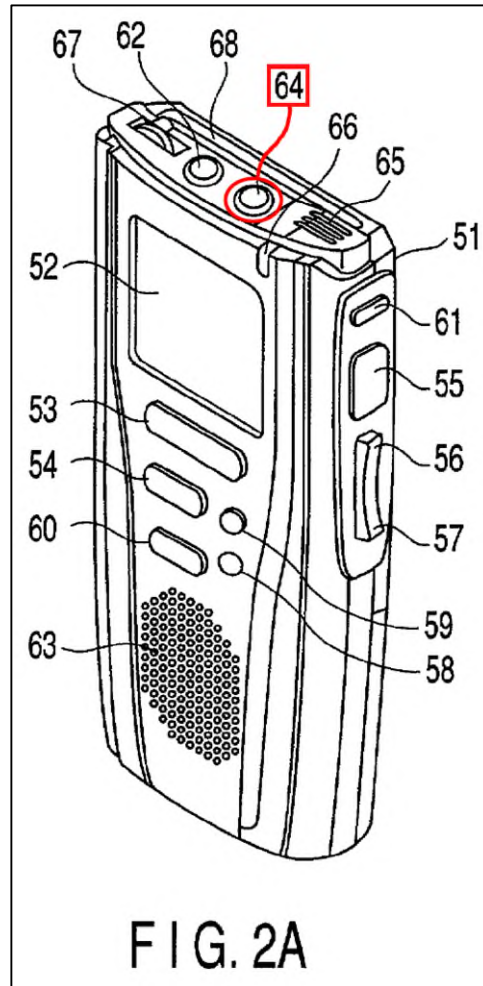
The system controller 301 in Strub’s local audio recording unit 300 has a local audio input—its connection to audio input device 303 (*e.g.*, a microphone)—configured to receive the local audio data from the audio input device 303:



Ex. 1003, Fig. 3 (excerpted, annotated); *id.* 21:65-25:49, 68:63-69:67 (audio from “lavalier microphone”); *see also id.* 64:50-65:3 (wired or wireless connections known in the art, which would include a standard microphone jack). Furthermore, Strub states it is “advantageous” to have the audio acquisition device “detachably attached.” *Id.* 69:23-26. A POSA would understand Strub’s statement about detachability as meaning that the microphone is not soldered/hard-wired but connected through an audio input such as a microphone jack/plug.

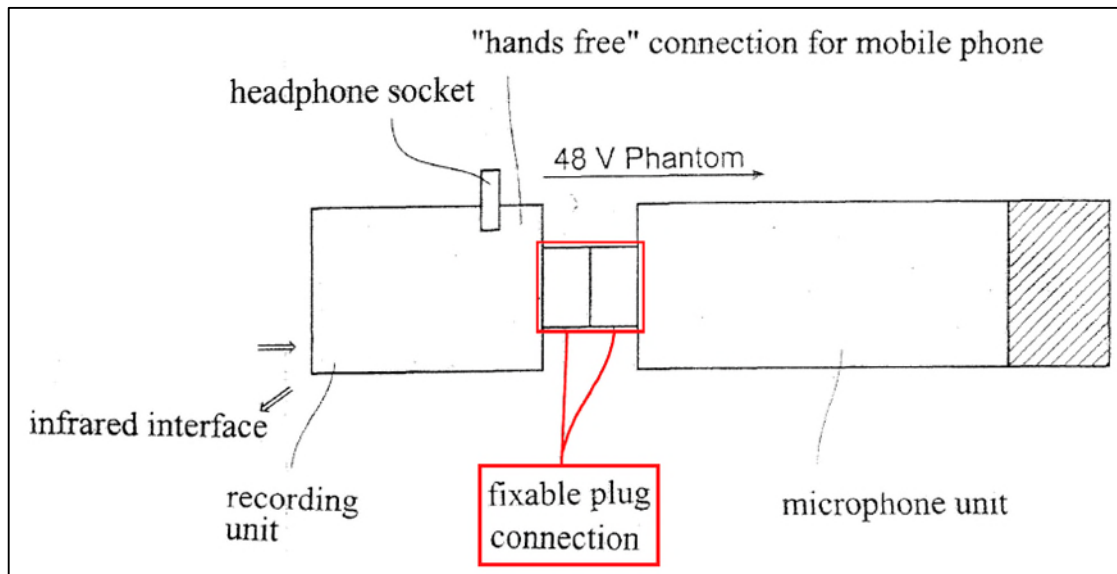
The additional elements of Claims 12 and 26 are also taught by Nagai and Gleissner. Nagai’s audio recorder has an audio input—“mike [sic] jack” 2 or 64—

for coupling to an audio input device—an external microphone—to receive the local audio data:



Ex. 1005, Fig. 2A (annotated); *id.* [0100], [0109], and [0139], Fig. 1.

Gleissner's audio recorder has a conventional audio input—an XLR plug connector—to couple to an audio input device—a microphone—to receive the local audio data:



Ex. 1006, Fig. 1 (annotated), [0013] (“[T]he recording unit can be coupled together with [a] microphone[] [using] an XLR connector....”), [0024], [0032]. Gleissner provides explicit motivation for using a standard microphone connector: “This has the advantage that the recording unit can be coupled together with practically any desired microphones, because an XLR connector is generally formed as the preferred embodiment in the case of microphones.” *Id.* [0013].

Woo refers to using a recorder 14 to “record the live performance of a performer 12, *e.g.*, a singer or actor.” Ex. 1004, 5:1-5. Recorder 14 necessarily would have had an audio input to couple to a microphone to receive sound from the performer. *See* Ex. 1002, ¶ 202.

Furthermore, a POSA would have been motivated to include Nagai’s microphone jack or Gleissner’s microphone plug connection in Strub’s and/or Woo’s local audio device because there were many commercially available types

and brands of microphones as of the priority date of the '444 Patent, *see* Ex. 1003, 21:65-22:2, 22:64-23:31, 24:61-64, 25:35-49, 29:35-37, 31:37-45, 32:17-26, 68:63-69:18, 84:52-62, and the operator would choose one according to the application. Ex. 1002, ¶ 203. A POSA would have understood the advantages of using Nagai's or Gleissner's standard microphone jacks/plugs to allow different kinds of microphones to be easily swapped in and out of Strub's and Woo's audio recording systems according to the application, and thus would have considered the combination obvious. *Id.*

C. Ground 3: Claims 16 and 24 are Rendered Obvious Under § 103 By the Combination of Strub, Woo, and Samadani

1. A POSA Would have Been Motivated to Combine Strub, Woo, and Samadani

A POSA would have been motivated to combine Strub and Woo, *supra* § IX.A.1, and to combine Samadani with Strub and/or Woo. The teachings of Strub, Woo, and Samadani provide substantial motivation to combine them. For example, the systems in Strub, Woo, and Samadani are the same type of apparatus having the same purpose. Each is for receiving and recording local audio in a local device, transmitting the same audio to a remote device, and recording the audio in the remote device. *See, e.g., id.* (Strub and Woo); Ex. 1007, Abstract, [0028], [0035], [0037]-[0038], [0042], [0044], [0048], [0053], Figs. 3-7. In addition, each of Strub's, Woo's, and Samadani's local audio devices wirelessly receives master timecodes

from a master timecode generator and uses the timing information to stamp the local audio. *See, e.g., supra* § IX.A.1 (Strub and Woo); Ex. 1007, [0038]-[0040], [0042], [0047]-[0048], Figs. 3 (items 321, 309a/309b), 4 (item 446), 5 (items 509, 525a/525b), Claims 10, 15, 19, 32, 35.

Woo itself provides motivations to use its synchronization methods in wireless recording systems. *See supra* § IX.A.1. In addition, modifying Samadani's recording unit to include a conventional SMPTE timecode input port for receiving SMPTE-formatted master timecodes from Woo's master clock would involve merely combining familiar elements according to known methods to improve Samadani's system and yield predictable results. Ex. 1002, ¶ 205.

Moreover, Strub, Woo, and Samadani came up with the same problem and solution identified in the '444 Patent: matching the timing between multiple wireless device recordings by generating master timecodes with a master timecode generator, providing those timecodes to a local recording device, and using the timecode's timing information to time-stamp the locally recorded audio data. *Supra* § IX.A.1 (discussing Strub and Woo); Ex. 1007, Ex. 1007, [0038]-[0040], [0042], [0047], [0048], Figs. 3 (items 321, 309a/309b), 4 (item 446), 5 (items 509, 525a/525b), Claims 10, 15, 19, 32, 35. *See* Ex. 1002, ¶ 206; *KSR*, 550 U.S. at 417, 420-21; *Ball*, 555 F.3d at 993.

Furthermore, all elements of Challenged Claims 16 and 24 appear in Strub, Woo, and/or Samadani, *infra* § IX.C.2, and comprise well-known, off-the-shelf audio-recording and components whose claimed use is predictable. Ex. 1002, ¶ 207. Furthermore, the technology and operation of such components was well-understood in the relevant time such that the combination of Strub, Woo, and Samadani would have had a high likelihood of success. *Id.*

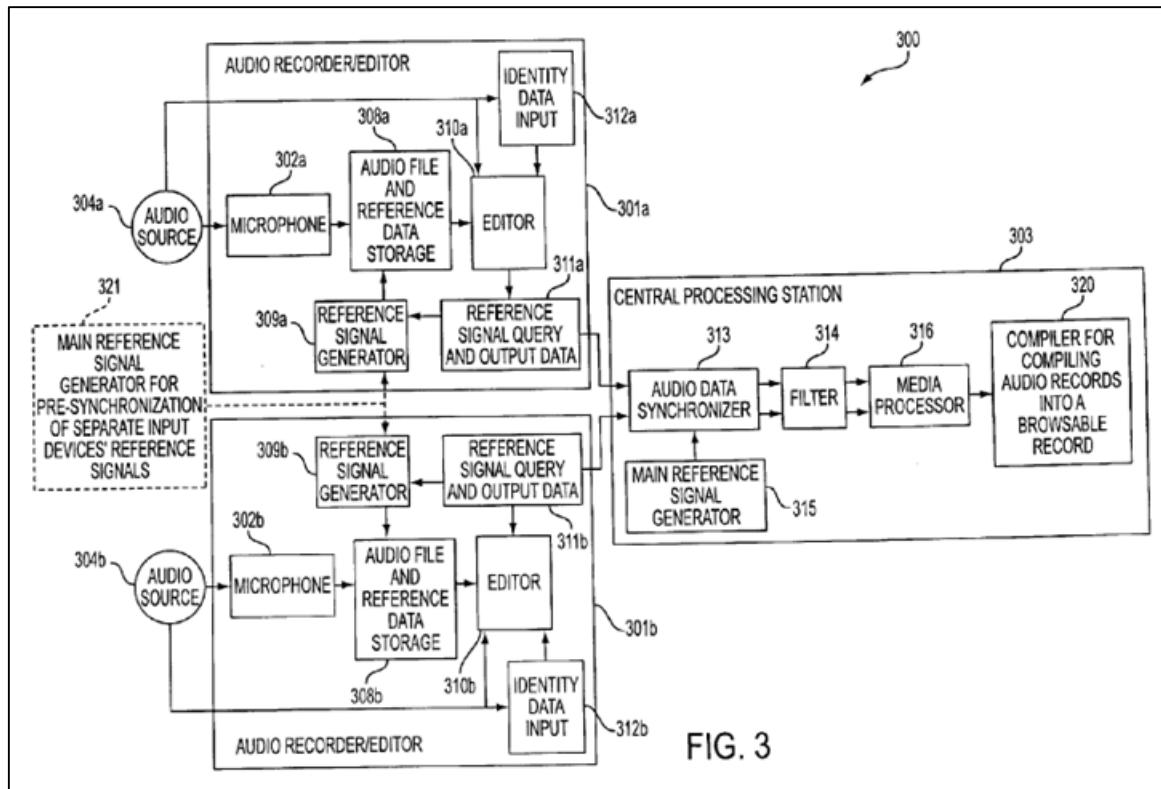
Since Strub, Woo, and Samadani teach the same kind of device used to solve the same problem identified in the '444 Patent, the combination of elements in the Challenged Claims is nothing more than “the predictable use of prior art elements according to their established functions,” and the combination would have had a high likelihood of success, a POSA would have been motivated to combine Strub, Woo, and Samadani. *See id.* ¶ 208.

2. **The Combination of Strub, Woo, and Samadani Meets All Elements of Challenged Claims 16 and 24**
 - a. **Claims 16 and 24: “A system according to claim [15/23], wherein the remote control unit is a personal computer.”**

Samadani teaches one or more local audio devices—*e.g.*, audio recorders/editors 301a/301b—which transmit locally generated audio to a remote receiver—*e.g.*, a central processing station 303. Ex. 1007, [0035]-[0036] (“media recorder/editors 301a and 301b [connected] to...central processing station 303....”),

Fig. 3, [0045] (“audio/visual recorders 501a and 501b...connected via a wire or wirelessly to the processing stations.”), [0046], Figs. 5, 6.

An embodiment of Samadani’s system is depicted in Fig. 3:



Samadani’s local audio devices—*e.g.*, audio recorders/editors 301a/301b—and remote receiver—*e.g.*, central processing station 303—“can be...personal computer[s].” *Id.* [0035], [0044] (“An audio/visual recorder can be a personal computer...”); *see also id.* [0015] (“[C]entral-processing-station/editor 106...can be a personal computer...”), [0022], [0046] (“[C]entral processing station 505...can be a personal computer...”). Samadani’s central processing station has a graphical user

interface (“GUI”) with various buttons and other graphical elements to allow the user to control the central processing station. *Id.* [0056]-[0057], [0059]-[0072].

A POSA would have been motivated to use, and known there was a high likelihood of success in using, Samadani’s personal computer, including its GUI, as Strub’s remote control unit in order to benefit from (1) the convenience and flexibility of a GUI for configuring and controlling Strub’s recording units, and (2) the cost savings in engineering and components associated with using standard hardware and software such as a personal computer with a GUI. Ex. 1002, ¶ 212.

D. No Relevant Secondary Considerations or Objective Indicia

Petitioner is not aware of any secondary considerations or objective indicia of nonobviousness which would impact the obviousness analysis of Grounds 1-3. Zaxcom is estopped from relying on (1) any of the evidence of objective indicia on which it relied in the Lectrosonics IPRs, or (2) any substantially similar evidence. *See supra*, § VI.C.2.

X. DISCRETIONARY DENIAL IS NOT WARRANTED

A. Section 325 (d)

Institution denial based on 35 U.S.C. §325(d) is unwarranted because the arguments and evidence presented here were not previously and/or properly considered. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential) (“*Advanced*

Bionics”), *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17-18 (PTAB Dec. 15, 2017) (precedential as to §III.C.5, first paragraph).

1. **Advanced Bionics—Part One**

Although Strub, Woo, Nagai and Gleissner were before the Examiner during prosecution of one or more patents in the priority chain of the ’444 Patent (*e.g.*, the ’207 Patent), there is no evidence that any was considered meaningfully, let alone in the combinations asserted in this Petition. *St. Jude Med., LLC v. Snyders Heart Valve LLC*, IPR2018-00105, Paper 15 at 12 (PTAB May 3, 2018) (instituting where “evidence of record does not demonstrate that the Examiner considered the references in the combinations relied upon by Petitioner or addressed arguments similar to those Petitioner now presents”). Furthermore, Strub, Woo, Nagai, and Gleissner are not “substantially the same” as the prior art substantively considered by the Examiner. *Advanced Bionics*, Paper 6 at 13-19. Samadani neither was before the Examiner nor is “substantially the same” as the prior art considered by the Examiner. *Id.* The only references that the Examiner considered substantively were U.S. Patent Pub. No. 2004/0237115 (“Horiuchi”) and U.S. Patent 4,872,195 (“Leonard”). See Ex. 1038 at 3-6. The Examiner never asserted, *e.g.*, that either of those references discloses recording locally generated audio as time-referenced local audio data and substantially simultaneously transmitting audio data to a remote device, creating time-referenced local audio data from locally generated audio and

at least one master timecode, synchronizing a local timecode with at least one master timecode, or creating time-referenced local audio data from at least one local timecode, as in Strub and Woo, or a local audio device wearable by a creator of said locally generated audio, as in Strub. *Id.*; see also *supra* Ground 1, Elements 1[Pre], 1[C], 1[I], 13[I], 13[J]. Nor are any of those limitations present in Horiuchi or Leonard.

2. **Advanced Bionics—Part Two**

Although Strub, Woo, Nagai, and Gleissner were before the examiner during prosecution of the related '207 Patent, the only place in the '207 prosecution history where Strub, Woo, Nagai, and Gleissner appear is in an IDS. Ex. 1022 at 1, 2. Although the Examiner signed the IDSs and added the footnote “ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH,” *id.*, there is no evidence that Strub, Woo, Nagai, or Gleissner received meaningful consideration; none appear in an Office Action or any other substantive discussion in the prosecution file. The lack of any evidence that the Examiner meaningfully considered Strub, Woo, Nagai, or Gleissner, or was even aware of Samadani, favors institution. *Microsoft Corp. v. SurfCast, Inc.*, IPR2022-00590, Paper 9 at 15 (PTAB Oct. 7, 2022) (instituting where cited art “was not extensively evaluated during examination and was not the basis for a rejection”); *Amazon.com, Inc. v. M2M Sols. LLC*, IPR2019-01205, Paper 14 at 16 (PTAB Jan. 27, 2020) (“a reference that ‘was

neither applied against the claims nor discussed by the Examiner’ does not weigh in favor of exercising the Board’s discretion under § 325(d) to deny a petition”).

Strub, Woo, Nagai, and Gleissner were considered by the PTAB in the Lectrosonics IPRs, but in those earlier proceedings the Board found claims similar to the present Challenged Claims unpatentable over those references. *See Supra* § VI.C. In contrast, the only claims **not** found unpatentable in the Lectrosonics IPRs included the limitation “replacing...[remote/remotely recorded] audio data with...local audio data.” Ex. 1014, 64 (Claims 1-14 unpatentable over Strub, Nagai, and Gleissner, replaced by substitute Claims 15-28); Ex. 1015, IPR Certificate, 1:30-31, 2:27-30; Ex. 1017, 73 (Claims 7-8, 11-12, and 14-15 unpatentable over Strub, Nagai, Gleissner, and Woo, replaced by substitute Claims 21-26); Ex. 1030, IPR Certificate, 1:41-43, 2:32-33; Ex. 1018, 6 n.6, 63 (Claims 1-4, 9-10, 12, 15, 31, 36, 37, and 41-44 unpatentable over Strub, Nagai, Gleissner, and Woo, Claim 45 (reciting storage of timecode-associated data in file header) unpatentable over those references plus U.S. Pat. 6,571,211 (replaced by substitute Claims 50-65); Ex. 1028 IPR Certificate, 1:41-43). That limitation does not appear in any Challenged Claim in the present case.

Thus, since the USPTO’s only substantive consideration of any of the presently presented prior art resulted in unpatentability and cancelation of claims

similar to the Challenged Claims, this factor weighs strongly against discretionary denial.

B. Section 314(a)

Under the Director’s Interim Procedure for Discretionary Denials (June 21, 2022) (“IP”), “the PTAB will not deny institution based on *Fintiv* if there is compelling evidence of unpatentability” (IP, 5), which this Petition provides. The *Fintiv* factors favor institution based on efficiency, fairness, and patent quality. *Apple v. Fintiv*, IPR2020-00019, Paper 11 at 5 (Mar. 20, 2020) (“*Fintiv*”) (precedential).

1. Stay Potential

Petitioner intends to seek a stay of the district court litigation, but without “specific evidence” how the court will rule, this factor is neutral. *Sand Revolution II v. Cont’l Intermodal Grp.–Trucking*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative).

2. Trial Timing and Diligence

Institution approximately six months from Petition filing would result in a FWD by August 2026. The district court in the Delaware Litigation has not set a trial date, but the final summary judgment and Daubert briefs are not due until April 10, 2026. Ex. 1031, 3. Thus, it is extremely unlikely that trial will start in or before August 2026.

Furthermore, Petitioner plans to seek a stay of the Delaware Litigation during the pendency of this IPR, which is likely to be granted, pushing the trial date back even further after the FWD, as the District of Delaware has historically granted requests to stay pending IPR that were filed after the institution decision. *See Ethicon LLC v. Intuitive Surgical, Inc.*, No. 17-871-LPS, 2019 WL 1276029, at *1-3 (D. Del. Mar. 20, 2019); *Bio-Rad Labs. Inc. v. 10X Genomics, Inc.*, No. 18-1679-RGA, 2020 WL 2849989, at *1-2 (D. Del. June 2, 2020); *NEC Corp. v. Peloton Interactive, Inc.*, No. 22-987-CJB, 2024 WL 1533952, at *1-3 (D. Del. Apr. 9, 2024). Thus, Factor 2 weighs against discretionary denial. *Fintiv*, Paper 11 at 9.

3. **Litigation Investment**

In the Delaware Litigation, fact discovery does not end until August 2025, Markman briefing and expert discovery have not even begun, Ex. 1031 at 2-3, a trial date has not been set, *id.* at 3, and no substantive orders have been issued related to the patents-in-suit. This factor weighs against discretionary denial. *Fintiv*, at 9-10.

4. **Issue Overlap**

Although all of the Challenged Claims are currently being asserted in the Delaware Litigation, that is at least partly because Zaxcom is asserting 132 claims and has refused to further narrow its list of claims at this time. The Court recently issued a revised scheduling order which requires Zaxcom to reduce its asserted claims before the *Markman* proceeding and after the *Markman* ruling. Ex. 1031 at

2-3. In addition, Petitioner has filed IPR Petitions on the '443, '902 and '207 Patents. Collectively, the four related IPR Petitions challenge a total of 62 claims, far too many to present to a jury, and there are three other patents-in-suit not subject to the aforementioned IPR Petitions. Thus, it is highly likely that many of the Challenged Claims will not be asserted in the Delaware Litigation. This weighs against discretionary denial, because “[t]he IPR trial will impact the integrity of the patent system positively by considering material issues not raised in the District Court Action.” *Apple Inc. v. Seven Networks, LLC*, IPR2020-00156, Paper 10 at 17, 19 (P.T.A.B. June 15, 2020); *Fintiv*, Paper 11 at 12-13.

5. **Litigation Parties**

This Petition involves the same parties as the Delaware Litigation, so this factor may “depend[] on which tribunal was likely to address the challenged patent first,” which is the PTAB (*supra* § X.B.2). *Google v. Parus Holdings*, IPR2020-00846, Paper 9 at 20-21 (PTAB Oct. 21, 2020). In this instance, the PTAB will address the challenged patent first since the FWD will issue before the Delaware trial. Ex. 1031, 3.

6. **Merits**

The “strong showing on the merits” presented here weighs against denial. *Seven Networks*, at 20.

XI. CONCLUSION

For the foregoing reasons, Petitioner requests institution of IPR and cancellation of all the Challenged Claims.

XII. PAYMENT OF FEES

Petitioner submits concurrently herewith the required fees under 37 C.F.R. §§ 42.15(a) and 42.103(a). The Office is authorized to charge any shortfall or other fees due during this proceeding to Deposit Account No. 50-2778.

Dated: February 7, 2025

/ Michael A. Fisher /
Jeffrey B. Plies, reg. no. 46,999
Michael A. Fisher, reg. no. 42,536
DECHERT LLP
Counsel for Petitioner

WORD COUNT CERTIFICATION

Pursuant to 37 C.F.R. § 42.24(d), I certify that this Petition contains 13,955 words (excluding the title page, table of contents, table of authorities, table of exhibits, mandatory notices, this certificate, the claim listing, and the certificate of service), as determined by Microsoft Word.

Dated: February 7, 2025

/ Michael A. Fisher /

Michael A. Fisher, Reg. No. 42,536

DECHERT LLP

Counsel for Petitioner

CHALLENGED CLAIM LISTING

Claim 1
1[Pre]: A system for locally recording locally generated audio as time-referenced local audio data and for substantially simultaneously transmitting audio data to a remote device, the system comprising:
1[A]: a remote receiver, the remote receiver configured to create at least one master timecode and to receive audio data;
1[B]: a local audio device capable of communicating with the remote receiver and configured to receive locally generated audio
1[C]: the at least one local audio device wearable by a creator of the locally generated audio,
1[D]: the at least one local audio device including: at least one local memory;
1[E]: at least one local transmitter;
1[F]: at least one local receiver; and
1[G]: at least one local processing unit, the at least one local processing unit operatively coupled to the at least one local memory, and, optionally, the at least one local transmitter and, optionally, the at least one local receiver
1[H]: wherein the at least one local memory stores instructions that, when executed by the at least one local processing unit, configures the local audio device to: receive the at least one master timecode from the remote receiver via the at least one local receiver;
1[I]: create time-referenced local audio data from the locally generated audio and the at least one master timecode;
1[J]: store the time-referenced local audio data in the at least one local memory; and
1[K]: wherein the audio data is transmitted to the remote receiver substantially simultaneously with the receiving of the local audio data by the local audio device, the creating of the time-referenced local audio data, or the storing of the time-referenced local audio data in the at least one local memory.

Claim 2

A system according to claim 1, wherein the local audio device is in the form of a body pack.

Claim 3

A system according to claim 1, wherein the local audio device is in the form of a body pack typically worn by news announcers and performers.

Claim 4

A system according to claim 1, wherein the at least one master timecode includes hour data, minute data, second data, SMPTE timecode, or combinations thereof.

Claim 5

A system according to claim 1, wherein the remote receiver is configured to communicate with a recording device.

Claim 6

A system according to claim 5, wherein the recording device is a multi-track recorder, a personal computer, a cellular phone, or a camera.

Claim 7

A system according to claim 1, wherein the remote receiver is a master timecode generator.

Claim 9

A system according to claim 1, wherein the time-referenced local audio data is configured to facilitate synchronization of the time-referenced local audio data and the remotely recorded audio data.

Claim 10

A system according to claim 1 further comprising: a remote control unit.

Claim 12

A system according to claim 1, the local audio device further comprising: at least one audio input configured to receive the local audio data.

Claim 13

13[Pre]: A system for locally recording locally generated audio as time-referenced local audio data and for substantially simultaneously transmitting audio data to a remote device, the system comprising:

13[A]: a remote receiver, the remote receiver configured to create at least one master timecode and to receive audio data;

13[B]: a local audio device capable of communicating with the remote receiver and configured to receive locally generated audio

13[C]: the at least one local audio device wearable by a creator of the locally generated audio,

13[D]: the at least one local audio device including: at least one local memory;

13[E]: at least one local transmitter;

13[F]: at least one local receiver; and

13[G]: at least one local processing unit, the at least one local processing unit operatively coupled to the at least one local memory, and, optionally, the at least one local transmitter and, optionally, the at least one local receiver,

13[H]: wherein the at least one local memory stores instructions that, when executed by the at least one local processing unit, configures the local audio device to: receive the at least one master timecode from the remote receiver via the at least one local receiver;

13[I]: synchronize a local timecode with the at least one master timecode;

13[J]: create time-referenced local audio data from the at least one local timecode;

13[K]: store the time-referenced local audio data in the at least one local memory; and

13[L]: wherein the audio data is transmitted to the remote receiver substantially simultaneously with the receiving of the local audio data by the local audio device, the creating of the time-referenced local audio data, or the storing of the time-referenced local audio data in the at least one local memory.

Claim 14

A system according to claim 13, wherein the local audio device is in the form of a body pack.

Claim 15

A system according to claim 13, wherein the local audio device is in the form of a body pack typically worn by news announcers and performers.

Claim 16

A system according to claim 15, wherein the remote control unit is a personal computer.

Claim 17

A system according to claim 13, wherein the at least one master timecode and the at least one local timecode include hour data, minute data, second data, SMPTE timecode, or combinations thereof.

Claim 18

A system according to claim 13, wherein the remote receiver is configured to communicate with a recording device.

Claim 19

A system according to claim 18, wherein the recording device is a multi-track recorder, a personal computer, a cellular phone, or a camera.

Claim 20

A system according to claim 13, wherein the remote receiver is a master timecode generator.

Claim 22

A system according to claim 13, wherein the time-referenced local audio data is configured to facilitate synchronization of the time-referenced local audio data and the remotely recorded audio data.

Claim 23

A system according to claim 13 further comprising: a remote control unit.

Claim 24

A system according to claim 23, wherein the remote control unit is a personal computer.

Claim 26

A system according to claim 13, the local audio device further comprising: at least one audio input configured to receive the local audio data.

Claim 27

A system according to claim 13, wherein the synchronize a local timecode with the at least one master timecode is done by synchronizing a local timecode generator to the master timecode, or synchronizing a local timecode to the master timecode.

CERTIFICATE OF SERVICE

I certify that today in:

RØDE Microphones, LLC., et al. v. Zaxcom, Inc., IPR2025-00557 (U.S. Patent 12,051,444)

I caused to be served a copy of:

Petition

Power of Attorney

Exhibits 1001-1007, 1011, 1014-1028, 1030, 1031, and 1037-1040

upon:

ZAXCOM INC., c/o:

Rita Chipperson - rcc@chippersonlaw.com

Janice Kwon - jk@chippersonlaw.com

Morgan Golightly - mdg@chippersonlaw.com

Gerard O'Rourke - gorourke@okorlaw.com

Sean O'Kelly - sokelly@okorlaw.com

Laura Carrig - lcarrig@okorlaw.com

via:

Electronic Mail

Patent Owner agreed to have the above-listed counsel accept electronic service of the Petition on November 20, 2024. *See* 37 CFR § 42.105(b) (“Upon agreement of the parties, service may be made electronically....”).

Dated: February 7, 2025

By: / Michael A. Fisher /
Michael A. Fisher, Reg. No. 42,536
Dechert LLP
Cira Centre
2929 Arch Street
Philadelphia, PA19104-2808
Tel: 215-994-2079
Fax: 215-655-2279
michael.fisher@dechert.com

Exhibit I

From: [Gerard O'Rourke](#)

Mail received time: Mon, 23 Jun 2025 18:58:43

Sent: Monday, June 23, 2025 2:58:44 PM

To: [Plies, Jeffrey](#) [Sean O'Kelly](#)

Cc: [Rita C. Chipperson](#) [Fisher, Michael](#) [Hackman, Blaine](#) [Nate Hoeschen](#) [Laura Carrig](#) [Edwards, Jeffrey](#)

Subject: RE: Zaxcom v. RODE, Motion to Stay - meet & confer

Importance: Normal

Sensitivity: None

Attachments:

[D.I. 98.pdf](#);

Jeff,

How about we talk on Wednesday at 10 am? If that works, please circulate dial-in.

In terms of the fact discovery deadline, Judge Murphy built some slack into the schedule (attached). Fact discovery closes on August 15, but opening expert reports are not until November 7. Given that you are moving to stay, it makes sense to push the fact discovery date back to see how the Court rules. Also, taking depositions during the beginning of August is far from desirable and frequently interferes with vacation schedules – both clients and attorneys. There will also be a claim narrowing after the Markman decision. In light of these events, we propose moving the fact discovery deadline to September 30. The other dates can stay the same. Please run that by your client. Thanks.

Jerry

Gerard M. O'Rourke, Esq.
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From: Plies, Jeffrey <Jeffrey.Plies@dechert.com>

Sent: Monday, June 23, 2025 1:56 PM

To: Gerard O'Rourke <gorourke@okorlaw.com>; Sean O'Kelly <sokelly@okorlaw.com>

Cc: Rita C. Chipperson <rcc@chippersonlaw.com>; Fisher, Michael <Michael.Fisher@dechert.com>; Hackman, Blaine <Blaine.Hackman@dechert.com>; Nate Hoeschen <nhoesch@shawkeller.com>; Laura Carrig <lcarrig@okorlaw.com>; Edwards, Jeffrey <jeffrey.edwards@dechert.com>

Subject: RE: Zaxcom v. RODE, Motion to Stay - meet & confer

Jerry,

We are available Tuesday 11-1 ET or Wednesday: 9:30-4 ET.

On the M&C we can discuss a fact discovery extension, but we will need to confer with our client before committing to a position. As a result, please be prepared to give us some specific proposals or options that we can take back to our client. Including, whether any other dates would be moved.

Regards,

Jeff

From: Gerard O'Rourke <gorourke@okorlaw.com>

Sent: Monday, June 23, 2025 11:26 AM

To: Plies, Jeffrey <Jeffrey.Plies@dechert.com>; Sean O'Kelly <sokelly@okorlaw.com>

Cc: Rita C. Chipperson <rcc@chippersonlaw.com>; Fisher, Michael <Michael.Fisher@dechert.com>; Hackman, Blaine <Blaine.Hackman@dechert.com>; Nate Hoeschen <nhoeschen@shawkeller.com>; Laura Carrig <lcarrig@okorlaw.com>; Edwards, Jeffrey <jeffrey.edwards@dechert.com>

Subject: RE: Zaxcom v. RODE, Motion to Stay - meet & confer

Jeff,

We are generally available for a meet and confer tomorrow and Wednesday. Please propose times. During our call, we should also discuss the fact discovery deadline and whether it should be extended.

Also, the joint claim construction brief is due on Friday. We have submitted these using a merged Word document in the past. To that end, would you please send us Word versions of the two claim construction briefs you filed? That would be very helpful.

Very truly yours,

Jerry

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From: Plies, Jeffrey <Jeffrey.Plies@dechert.com>

Sent: Friday, June 20, 2025 2:41 PM

To: 'Gerard O'Rourke' <gorourke@okorlaw.com>; Sean O'Kelly <sokelly@okorlaw.com>

Cc: Rita C. Chipperson <rcc@chippersonlaw.com>; Fisher, Michael <Michael.Fisher@dechert.com>; Hackman, Blaine <Blaine.Hackman@dechert.com>; Nate Hoeschen <nhoeschen@shawkeller.com>; Laura Carrig <lcarrig@okorlaw.com>; Edwards, Jeffrey <jeffrey.edwards@dechert.com>

Subject: Zaxcom v. RODE, Motion to Stay - meet & confer

Jerry,

As mentioned on our call earlier this week, Defendants intend to move for a stay of the district court proceedings in view of the instituted IPRs. In order to comply with the local rules, can you please let us know your availability Mon-Wed next week for a short meet-and-confer where you can inform us of Plaintiff's position.

Regards,

Jeff

This e-mail is from Dechert LLP, a law firm, and may contain information that is confidential or privileged. If you are not the intended recipient, do not read, copy or distribute the e-mail or any attachments. Instead, please notify the sender and delete the e-mail and any attachments. Thank you

This e-mail is from Dechert LLP, a law firm, and may contain information that is confidential or privileged. If you are not the intended recipient, do not read, copy or distribute the e-mail or any attachments. Instead, please notify the sender and delete the e-mail and any attachments. Thank you

Exhibit J

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RØDE MICROPHONES, LLC and
FREEDMAN ELECTRONICS PTY LLC,
Petitioner,

v.

ZAXCOM, INC.,
Patent Owner.

IPR2025-00557
Patent 12,051,444

Mailed: April 7, 2025

Before PETER A. JONES, *Trial Paralegal*.

NOTICE OF FILING DATE ACCORDED TO PETITION
AND
TIME FOR FILING PATENT OWNER PRELIMINARY RESPONSE

The petition for *inter partes* review filed in the above proceeding has been accorded the filing date of February 7, 2025.¹

¹ This paralegal notes that the petition concerns a patent that was only issued six months before this date, on July 30, 2024. Ex. 1001, code (45). *Inter partes* review generally can only be granted nine months after the date of the

Patent Owner may file a preliminary response to the petition no later than three months from the date of this notice. The preliminary response is limited to setting forth the reasons why the requested review should not be instituted. Patent Owner may also file an election to waive the preliminary response to expedite the proceeding. For more information, please consult the Office Patent Trial Practice Guide, 77 Fed. Reg. 48756 (Aug. 14, 2012), which is available on the Board Web site at <http://www.uspto.gov/PTAB>.

Patent Owner is advised of the requirement to submit mandatory notice information under 37 C.F.R. § 42.8(a)(2) within 21 days of service of the petition. Mandatory notices include identifying any other judicial or administrative matter that would affect, or be affected by, a decision in the proceeding. 37 C.F.R. § 42.8(b)(2). Such administrative matters include requests for certificates of correction.

The parties are encouraged to use the heading on the first page of this Notice for all future filings in the proceeding.

In general, all represented parties must designate a lead counsel and at least one back-up counsel, and lead counsel must be a registered practitioner. 37 C.F.R. § 42.10(a). The Board, however, may permit a party to proceed without back-up counsel upon a showing of good cause, so long as lead counsel is a registered practitioner. *Id.* Once a party has designated a

patent's issue. 35 U.S.C. § 311(c). Petitioner nonetheless claims that the '444 patent is available for *inter partes* review and is otherwise not barred or estopped from requesting such review. Paper 1, 1. While petitions filed within nine months of the patent's issue are more appropriately subject to post-grant review (*see* 35 U.S.C. § 321(c)), Board policy is for Patent Owner to raise the issue itself.

registered practitioner as lead counsel pursuant to 37 C.F.R. § 42.10(a) and filed a power of attorney for lead counsel if required by 37 C.F.R.

§ 42.10(b), that party is authorized to file a motion seeking leave to proceed without back-up counsel. Such a motion shall not be filed earlier than 21 days after service of the petition, which is the time for filing patent owner mandatory notices. A party that files such a motion need not designate back-up counsel unless and until its motion to proceed without back-up counsel is denied. The parties are advised that the types of good cause sufficient to permit a party to proceed without back-up counsel are limited. *See Expanding Opportunities To Appeal Before the Patent Trial and Appeal Board*, 89 C.F.R. 82172, 82174 (Oct. 10, 2024), which is available at <https://www.federalregister.gov/d/2024-23319>. The parties are also advised that permission to proceed without back-up counsel may be revoked at the Board's discretion at any time during a proceeding. *See id.* For example, permission to proceed without back-up counsel may be revoked if the absence of back-up counsel causes scheduling problems or impedes Board proceedings. *See id.*

Once a party has designated a registered practitioner as lead counsel pursuant to 37 C.F.R. § 42.10(a) and filed a power of attorney for lead counsel if required by 37 C.F.R. § 42.10(b), that party is also authorized to file one or more motions for *pro hac vice* recognition of back-up counsel pursuant to 37 C.F.R. § 42.10(c)(1) and/or one or more notices of intent to designate a provisionally recognized PTAB attorney as back-up counsel pursuant to 37 C.F.R. § 42.10(c)(2). A motion or notice seeking *pro hac*

vice recognition shall not be filed earlier than 21 days after service of the petition, which is the time for filing patent owner mandatory notices.

A motion for *pro hac vice* recognition filed pursuant to 37 C.F.R. § 42.10(c)(1) shall be accompanied by the fee set forth in 37 C.F.R.

§ 42.15(e). Such motion must:

- a. Contain a statement of facts showing there is good cause for the Board to recognize counsel *pro hac vice* during the proceeding; and
- b. Be accompanied by an affidavit or declaration in which the individual seeking *pro hac vice* recognition attests to the following:
 - i. Membership in good standing of the Bar of at least one State or the District of Columbia;
 - ii. No suspensions or disbarments from practice before any court or administrative body;
 - iii. No application for admission to practice before any court or administrative body ever denied;
 - iv. No sanctions or contempt citations ever imposed by any court or administrative body;
 - v. The individual seeking to appear has read and will comply with the Office Patent Trial Practice Guide and the Board's Rules of Practice for Trials set forth in 37 CFR part 42;
 - vi. The individual will be subject to the USPTO Rules of Professional Conduct set forth in 37 CFR 11.101 *et seq.* and disciplinary jurisdiction under 37 CFR 11.19(a);
 - vii. All other proceedings before the Office for which the individual has applied to appear *pro hac vice* in the last three years; and

viii. Familiarity with the subject matter at issue in the proceeding.²

If the affiant or declarant is unable to provide any of the information requested above or make the required statements or representations under oath, the individual must provide a full explanation of the circumstances as part of the affidavit or declaration. A party must also file a power of attorney for the person seeking *pro hac vice* recognition pursuant to 37 C.F.R. § 42.10(b).

A notice of intent to designate a provisionally recognized PTAB attorney as back-up counsel filed pursuant to 37 C.F.R. § 42.10(c)(2) must:

- (a) Identify the registered practitioner who will serve as lead counsel;
- (b) Identify the most recent prior proceeding in which the person seeking to appear was recognized *pro hac vice* by order of the Patent Trial and Appeal Board pursuant to a motion of the type described in 37 C.F.R. § 42.10(c)(1); and
- (c) Be accompanied by Certification in the form of an affidavit or declaration in which the individual seeking *pro hac vice* recognition attests to the following:
 - i. Membership in good standing of the Bar of at least one State or the District of Columbia;
 - ii. No suspensions or disbarments from practice before any court or administrative body;

² The type of familiarity referenced in the Board's rules regarding *pro hac vice* admission is legal familiarity; technical familiarity, though expected, is not required. See Expanding Opportunities To Appear Before the Patent Trial and Appeal Board, 89 F.R. 82172, 82175 (Oct. 10, 2024); 37 C.F.R. § 42.10(c)(1).

- iii. No application for admission to practice before any court or administrative body ever denied;
- iv. No sanctions or contempt citations ever imposed by any court or administrative body;
- v. The individual seeking to appear has read and will comply with the Office Patent Trial Practice Guide and the Board's Rules of Practice for Trials set forth in 37 CFR part 42;
- vi. The individual will be subject to the USPTO Rules of Professional Conduct set forth in 37 CFR 11.101 *et seq.* and disciplinary jurisdiction under 37 CFR 11.19(a);
- vii. All other proceedings before the Office for which the individual has applied to appear *pro hac vice* in the last three years; and
- viii. Familiarity with the subject matter at issue in the proceeding.

The Certification should be a separate document that is filed as an exhibit.

If the affiant or declarant is unable to provide the information requested above or make the required statements or representations under oath, or if the affiant or declarant does not qualify as a provisionally recognized PTAB attorney pursuant to 37 C.F.R. § 42.10(c)(2), the procedure set forth in 37 C.F.R. § 42.10(c)(2) is not available, and *pro hac vice* recognition may only be obtained via the process set forth in 37 C.F.R. § 42.10(c)(1). *See* 37 C.F.R. § 42.10(c)(2)(iv). A party must also file a power of attorney for the person seeking *pro hac vice* recognition pursuant to 37 C.F.R. § 42.10(b). *Pro hac vice* recognition will not be effective until the party files an updated mandatory notice after the expiration of the applicable time period (5 or 10 days) set forth in 37 C.F.R. § 42.10(c)(2)(iii).

The parties are also reminded that unless otherwise permitted by 37 C.F.R. § 42.6(b)(2), all filings in this proceeding must be made electronically in the Patent Trial Appeal Case Tracking System (P-TACTS), accessible from the Board Web site at <http://www.uspto.gov/PTAB>. To file documents, users must first obtain a user ID by registering with MyUSPTO. Information regarding how to register with MyUSPTO and use P-TACTS is available at the Board Web site at <https://www.uspto.gov/patents/ptab/patent-trial-and-appeal-case-tracking-system-p-tacts>.

The parties may request a conference call as needed. An email requesting a conference call with the Board shall: (a) copy all parties, (b) indicate generally the relief being requested or the subject matter of the conference call, (c) include multiple times when all parties are available, (d) state whether the opposing party opposes any relief requested, and (e) if opposed, either certify that the parties have met and conferred telephonically or in person in an attempt to reach agreement, or explain why such meet and confer did not occur. If a party is unable to include any of the above information, the party shall explain in the email why doing so was not possible. The email may not contain substantive argument and, unless otherwise authorized, may not include attachments. *See* Trial Practice Guide at 9–10. If practicable, in order to ensure emails are consistent with the above, the parties shall send a single, joint email that includes items (a)–(e).

If there are any questions pertaining to this notice, please contact the Patent Trial and Appeal Board at trials@uspto.gov or 571-272-7822.

IPR2025-00557
Patent 12,051,444

PETITIONER:

Jeffery Plies
Michael Fisher
DECHERT LLP
jeffrey.plies@dechert.com
michael.fisher@dechert.com

PATENT OWNER:

Rita Chipperson
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Gerard O'Rourke
O'KELLY & O'ROURKE, LLC
gorourke@orourkefirm.com

**NOTICE CONCERNING ALTERNATIVE DISPUTE RESOLUTION
(ADR)**

The Patent Trial and Appeal Board (PTAB) strongly encourages parties who are considering settlement to consider alternative dispute resolution as a means of settling the issues that may be raised in an AIA trial proceeding. Many AIA trials are settled prior to a Final Written Decision. Those considering settlement may wish to consider alternative dispute resolution techniques early in a proceeding to produce a quicker, mutually agreeable resolution of a dispute or to at least narrow the scope of matters in dispute. Alternative dispute resolution has the potential to save parties time and money.

Many non-profit organizations, both inside and outside the intellectual property field, offer alternative dispute resolution services. Listed below are the names and addresses of several such organizations. The listings are provided for the convenience of parties involved in cases before the PTAB; the PTAB does not sponsor or endorse any particular organization's alternative dispute resolution services. In addition, consideration may be given to utilizing independent alternative dispute resolution firms. Such firms may be located through a standard keyword Internet search.

CPR INSTITUTE FOR DISPUTE RESOLUTION	AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION (AIPPLA)	AMERICAN ARBITRATION ASSOCIATION (AAA)	WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)	AMERICAN BAR ASSOCIATION (ABA)
Telephone: (212) 949-6490	Telephone: (703) 415-0780	Telephone: (212) 484-3266	Telephone: 41 22 338 9111	Telephone : (202) 662-1000
Fax: (212) 949-8859	Fax: (703) 415-0786	Fax: (212) 307-4387	Fax: 41 22 733 5428	N/A
575 Lexington Ave	241 18th Street, South, Suite 700	140 West 51st Street	34, chemin des Colombettes	1050 Connecticut Ave, NW
New York, NY 10022	Arlington, VA 22202	New York, NY 10020	CH-1211 Geneva 20, Switzerland	Washington D.C. 20036
www.cpradr.org	www.aippla.org	www.adr.org	www.wipo.int	www.americanbar.org

If parties to an AIA trial proceeding consider using alternative dispute resolution, the PTAB would like to know whether the parties ultimately decided to engage in alternative dispute resolution and the reasons why or why not. If the parties actually engage in alternative dispute resolution, the PTAB

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would be interested to learn what mechanism (e.g., arbitration, mediation, etc.) was used and the general result. Such a statement from the parties is not required but would be helpful to the PTAB in assessing the value of alternative dispute resolution to parties involved in AIA trial proceedings. To report an experience with ADR, please forward a summary of the particulars to the following email address: PTAB_ADR_Comments@uspto.gov