

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Lectrosonics, Inc.,
Petitioner

v.

Zaxcom, Inc.,
Patent Owner

Case IPR2018-01129
U.S. Patent 7,929,902

Zaxcom, Inc.'s Patent Owner Response

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PATENT OWNER'S EXHIBIT LIST

<u>Exhibit Number</u>	<u>Description</u>
2001	Declaration of Glenn Norman Sanders
2002	Resume of James M. DeFilippis
2003	05.05.09.Wireless Microphone System.revised.draft.rcc
2004	05.05.10.FIG.2A.aes
2005	05.05.10.FIG3.aes
2006	05.05.10.FIG.5aes
2007	05.05.10m FIG.4.aes
2008	05.05.10.Wireless Microphone System.revised.draft.backup.rcc
2009	05.05.10.Wireless Microphone System.revised.draft.rcc
2010	05.05.13.Wireless Microphone System.revised.draft.rcc
2011	05.05.13.Wireless Multitrack Recording System.Detailed Description.rcc
2012	05.05.13.Wireless Multitrack Record.FIG 3.rcc
2013	05.05.16.FIG.2A.aes
2014	05.05.16.FIG4.aes
2015	05.05.16.FIG.5aes
2016	05.05.16.Wireless Microphone System.revised.draft.rcc
2017	05.05.16.Wireless Recording System Det Desc Emailed To Client.rcc

2018	patent application 11/181,062
2019	05.07.12 Zaxcom Virtual Recording System Final draft w Howy changes rcc
2020	05.07.12 Zaxcom Virtual Recording System. final draft.rcc
2021	05.07.12.ZXC-001.Figures.rcc
2022	05.06.30.FIG. 8 to Earl.Fax Coversheet.rcc
2023	deva recorder
2024	RX4900
2025	05.07.08.zxc-001 chipperson
2026	05.07.08 Zaxcom Virtual Recording System.clean.rcc
2027	05.07.08 Zaxcom Virtual Recording System.marked up.rcc
2028	05.07.08 Zaxcom Virtual Recording System.backup.rcc
2029	05.07.07 Zaxcom Virtual Recording System.backup.rcc
2030	05.07.07 Zaxcom Virtual Recording System.rcc
2031	05.07.07.FIG. 8 to Earl.Fax Coversheet.rcc
2032	05.07.06 Zaxcom Virtual Recording System.rcc
2033	05.07.05 Zaxcom Virtual Recording System.rcc
2034	zxc-001 chipperson
2035	named 05.06.22 FIG 4–5 aes
2036	05.06.24 FIG 10 aes
2037	05.06.24 FIG 9 aes
2038	05.06.24 FIG 7 aes (2)
2039	05.06.22 FIG 6 aes

2040	05.06.27 Letter To Draftsperson.Bob.Fax Coversheet
2041	named 05.06.24 Virtual Recording System. Det Desc.Final.Emailed to Client for review.rcc
2042	05.06.24 Wireless Recording System Det Desc Revised Figures rcc
2043	05.06.24.PartialWireless Recording System Det Desc Revised Figures rcc
2044	05.06.23 Wireless Recording System Det Desc Revised Figures rcc
2045	05.06.23.FIG 10 aes
2046	05.06.23.FIG 9 aes
2047	05.06.22 Wireless Recording System Det Desc Revised Figures 7 9 and 10 rcc
2048	05.06.23 FIG 7 aes (2)
2049	05.06.23 FIG 3 aes
2050	05.06.22 FIG 3 aes
2051	05.06.22 FIG 7 aes (2)
2052	05.06.22 FIG 10 aes
2053	05.06.22 9 aes
2054	05.06.22 FIG 8 aes
2055	05.06.22 Wireless Recording System Det Desc Revised Figures rcc
2056	05.06.22.FIG.2A.aes
2057	05.06.03.FIG.2A.aes

2058	05.06.21 Wireless Recording System Det Desc Revised Figures rcc
2059	05.06.20.FIG. 4.aes
2060	05.06.20 Wireless Recording System Det Desc Revised Figures rcc
2061	05.05.20.Wireless Multitrack Recording System.FIG. 3.rcc.vsd
2062	05.06.17.FIG. 4.aes
2063	05.06.20.Mixing System FIG. 3 aes.vsd
2064	05.06.02.Mixing System FIG. 3 aes.vsd
2065	05.05.16.Wireless Multitrack Recording System.FIG. 3.rcc
2066	05.06.17.FIG. 5 aes
2067	05.06.18.FIG. 7 aes
2068	05.06.18.FIG. 8 aes
2069	05.06.18.FIG. 6 aes
2070	05.06.18.FIG. 9 aes
2071	Page 1
2072	Page 2
2073	Page 3
2074	Page 4
2075	Page 5
2076	05.06.03 Wireless Multi-Track Recording System.FIG. 3.rcc
2077	Screen shot of folder showing last modified date and time of Exhibits 2 through 2076

2078	Declaration of Ms. Rita Chipperson, Esq.
2079	Declaration of Mr. James M. DeFilippis
2080	a photograph of a Zaxcom device taken by March 2005
2081	diagram of a Zaxcom device (the IFBTX7) that was taken by March, 2005
2082	document of the Zaxcom TRX900 Wireless Microphone with integrated IFB, remote control, time-code and recording a Zaxcom device (the IFBTX7) that was created by March, 2005
2083	Video of a presentation on the Zaxcom TRX900 at the NAB conference in Las Vegas in April, 2005
2084	The American Heritage Dictionary, Third Edition, Houghton Mifflin Company, 1993, p. 835.
2085	Supplemental Declaration of Ms. Rita Chipperson, Esq. (served but not filed)
2086	Supplemental Declaration of Glenn Norman Sanders (served but not filed)
2087	Declaration of Glenn Norman Sanders for Patent Owner Response and Motion to Amend
2088	Declaration of Ms. Rita Chipperson, Esq. for Patent Owner Response and Motion to Amend
2089	Seshadri et al., 2005/0136839
2090	Smith, U.S. Patent 7,079,026
2091	File history of U.S. Patent Number 8,385,814
2092	Effron, U.S. Patent 6,862,429
2093	File history of U.S. Patent Number 7,929,902
2094	Valeski, U.S. Patent 6,678,501

2095	File history of U.S. Patent Number 7,711,443
2096	Grass Valley Launches K2 Server
2097	GV Grass Valley Thomson K2 HD SDI Media Client Server K2-HD-13
2098	First photograph of Emmy award achieved by Mr. Glenn Sanders
2099	Second photograph of Emmy award achieved by Mr. Glenn Sanders
2100	Third photograph of Emmy award achieved by Mr. Glenn Sanders
2101	First Photograph of a Technical Achievement Award from the Academy of Motion Picture Arts and Sciences to Mr Glenn Sanders and Mr. Howard Stark, the inventors of the '902 patent
2102	Second Photograph of a Technical Achievement Award from the Academy of Motion Picture Arts and Sciences to Mr Glenn Sanders and Mr. Howard Stark, the inventors of the '902 patent
2103	Declaration of Mr. William Sarokin
2104	Declaration of Mr. Jeffrey S. Wexler
2105	reserved
2106	Program of the 68 th Engineering Emmy Awards
2107	Press Release entitled "TELEVISION ACADEMY ANNOUNCES HONOREES FOR THE 68TH ENGINEERING EMMY® AWARDS"
2108	Primetime Emmy Awards Official Entry Form For Outstanding Achievement in Engineering Development

2109	Transcript of deposition of Mr. John Tinsman, January 16, 2018
2110	Microsoft Encarta College Dictionary, St. Martin's Press, 175 Fifth Avenue, New York, NY 10010 (2001), p. 1628.
2111	Declaration of Mr. James M. DeFilippis for Patent Owner Response and Motion To Amend
2112	Application Ser. No. 11/404,735, filed April 14, 2006
2113	TRX900AA manual
2114	TRX900LA & TRX900LAS manual

I. INTRODUCTION

The Board should not cancel any claim of U.S. Patent No. 7,929,902 (“the ‘902 patent”) because Petitioner has not shown by a preponderance of the evidence that any claim is unpatentable for three separate and independent reasons.

First, each of the Petitioner’s proposed grounds of rejection is missing one or more limitations of the claims of the ‘902 patent.¹ For example, none of the combinations of prior art references asserted by Petitioner teaches that (i) local audio generated by a performer is stored in a local audio device as local audio data, (ii) the same local audio is transmitted to a remote recorder or receiver, (iii) the same local audio is remotely recorded at the recorder or receiver as remote audio data, and (iv) that the local audio data is combined with the remote audio data, as required by independent claim 12. None of the combinations of prior art references would have taught a “local audio device wearable by a creator of said locally generated audio” as recited in independent claim 7. None of the prior art combinations would have taught a local audio device including (1) a local audio device receiver, (2) an audio input port for receiving locally generated audio from an audio input device, (3) a memory, (4) a local timecode generator; and (5) a control unit electrically coupled to (i) said local audio device receiver, (ii) said

¹ *Infra*, §§ V.A.2 and V.B.2-8.

audio input device, (iii) said memory, and (iv) said local timecode generator, as recited in independent claim 7.

Second, the Petitioner did not present any objective evidence as to why one of ordinary skill in the art would have been motivated to modify U.S. Patent 6,825,875 to Strub, the sole primary references relied upon by Petitioner, with the teachings of the secondary references and reasonably expect success in achieving the claimed inventions of claim 7 or claim 12. That is, the Petitioner did not show 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.”²

Third, objective indicia of non-obviousness, including satisfaction of a long felt need, and industry praise and recognition (*e.g.*, an Emmy award and a Technical Achievement Award from the Academy of Motion Picture Arts and Sciences) support the patentability of the claims of the ‘902 patent. *Infra*, § VII.4. Indeed, Petitioner’s own expert testified under oath that he considered it to be an “honor” to receive an Emmy or Technical Achievement Award (Ex. 2109, pp. 124-125) and that he “would be happy to receive such an award.” *Id.* at 123.

² *OSRAM Sylvania, Inc. v. Am Induction Techs., Inc.*, 701 F.3d 698, 706 (Fed. Cir. 2012).

For these reasons and those explained more fully below, the Petitioner failed to show by a preponderance of the evidence that any claim of the '902 patent is unpatentable.

II. TECHNOLOGY BACKGROUND

A. Prior Art Audio Systems

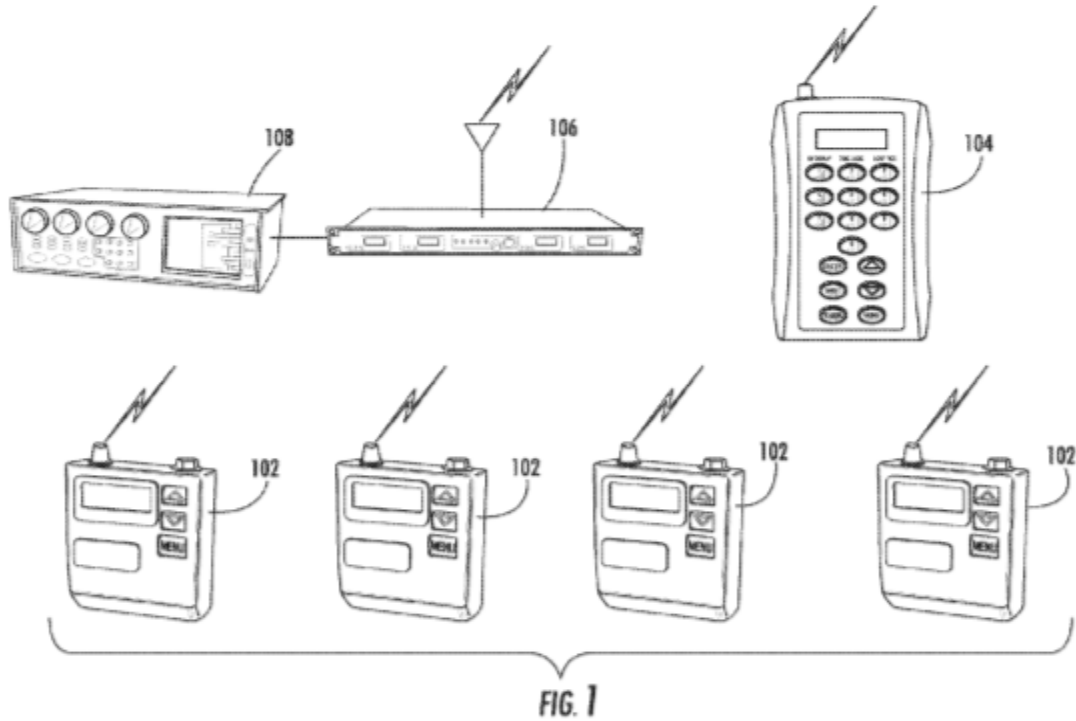
As discussed in the background section of the '902 patent, prior art audio systems “include a multi-track audio recorder wired to one or more microphones.” Ex. 1001, col. 1, l. 35 In these systems, “one or more performers performing on a sound stage are recorded by one or more microphones that are directly wired by the multi-track recorder. The multi-track recorder combines the single track of audio received from each microphone to create one multi-track audio file.” *Id.* at col. 1, ll. 36-40.

Other prior art systems “include a multi-track audio recorder and an associated audio receiver that receive audio wirelessly from one or more wireless transmitters.” *Id.* at col. 1, ll. 49-51. An “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.” *Id.* at col. 1, ll. 53-56. “The audio recorder then combines the wireless transmissions received from all body packs to create one multi-track audio file.” *Id.* at col. 1, ll. 56-58.

The inventors of the '902 patent recognized that the prior art systems had problems with “the occurrence of wireless transmission errors such as dropouts.” *Id.* at col. 1, ll. 59-60. Moreover, the use of redundant receivers in the prior art did “not prevent loss of data due to interference (*i.e.*, a distortion of the received audio signal due to receipt of multiple wireless signals).” *Id.* at col. 2, ll. 1-3. “Upon the occurrence of interfering signals, audio created during a performance (e.g., a live performance) may simply be lost due to the inability of the receiver to receive a clean audio signal.” *Id.* at col. 2, ll. 3-6.

B. The '902 Patent: Mr. Glenn Sanders and his colleague, Mr. Howard Stark, Invent A New Wireless Recording System To Address The Interference and Dropout Problems.

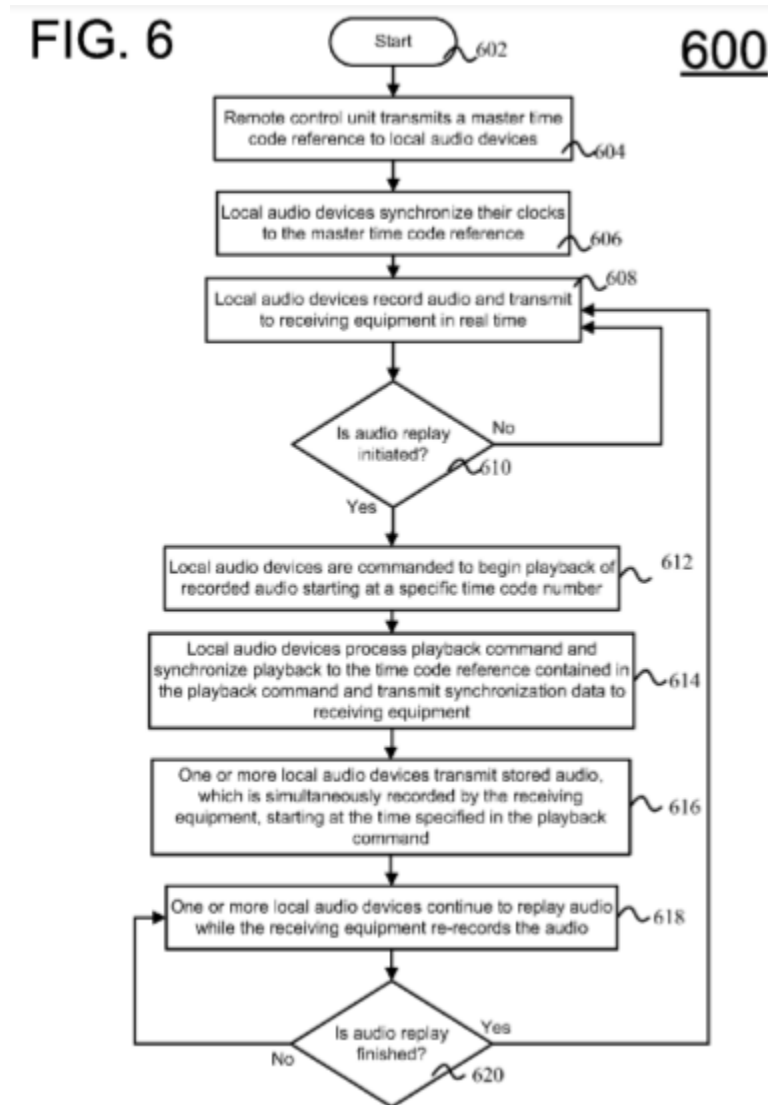
The '902 patent addresses the deficiencies of the prior art with a wireless recording system of components including wearable local audio devices 102, a remote control unit 104, a remote receiver 106 and a remote recorder 108 as shown in FIG. 1, which is reproduced below.



These components operate together in a particular way to store local audio generated by a performer in a wearable local audio device 102 as local audio data, to transmit the same local audio from the local audio device 102 to a remote receiver 106/recorder 108, to record the same local audio at the remote receiver 106/recorder 108 as remotely recorded audio data, and to combine the local audio data at the wearable local audio device 102 with the remotely recorded audio data at the remote receiver 106/recorder 108. In this manner, segments of audio that were not received properly at the remote receiver 106/recorder 108 (e.g., dropouts) because of wireless transmission errors can be replaced with corresponding segments of the local audio data at the wearable local audio device 102. This

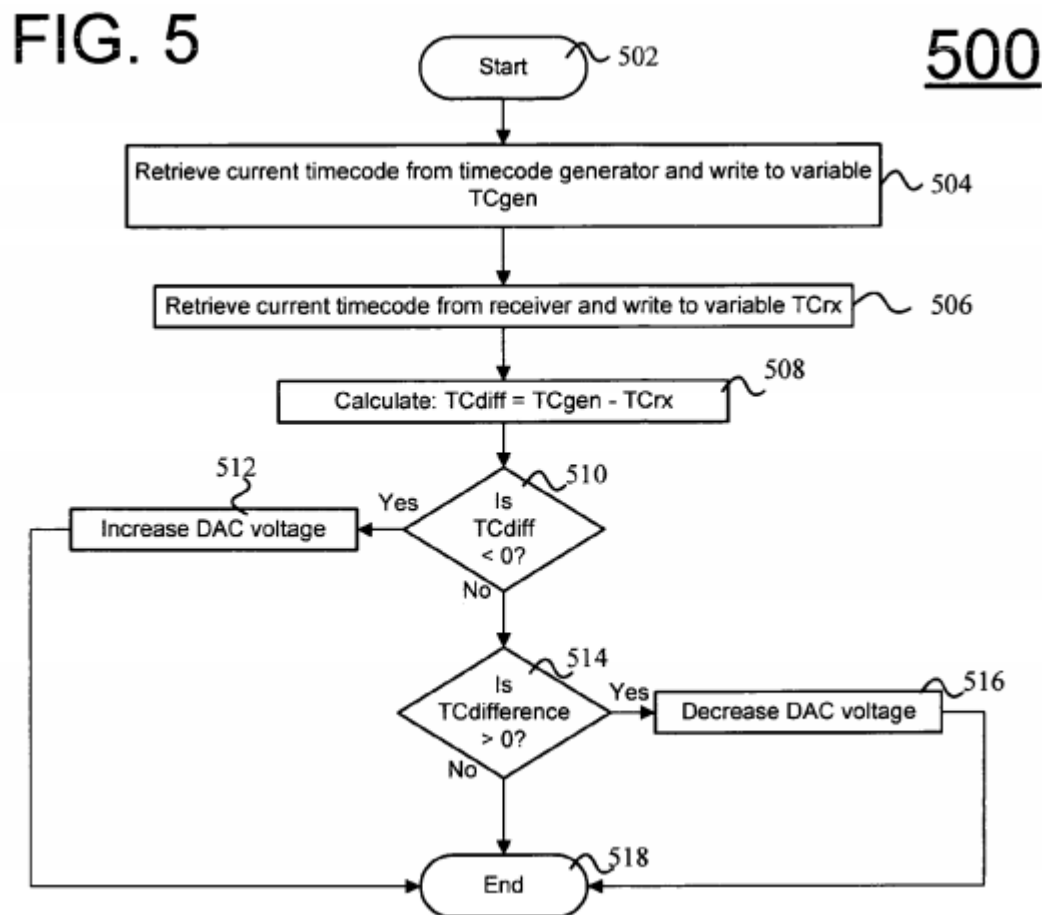
would allow repair of the remotely recorded audio, thereby saving the time and expense associated with redoing the performance.

FIG. 6, reproduced below, “depicts a process for recording audio and for replaying and re-recording segments of missed audio.” *Id.* at 3:46-48.



In step 602, the “local audio devices synchronize their clocks to the master time code reference.” “FIG. 5 [reproduced below] depicts a process for modifying

the speed of a local timecode generator as necessary to maintain its synchronization with a master timecode generator.” *Id.* at col. 3, ll. 53-55



III. SUMMARY OF THE INSTITUTED GROUNDS FOR REVIEW

Below is a summary of the proposed claim rejections instituted by the Board:

1. Claims 7, 8, 11, 12, 14, 15 are alleged to be obvious over U.S. Patent 6,825,875 (“Strub”);
2. Claims 7, 8, and 11 are alleged to be obvious over Strub in combination with U.S. Patent Appl. Pub. 2002/0159179 (“Nagai”);
3. Claims 7, 8, and 11 are alleged to be obvious over Strub in combination with U.S. Patent Appl. Pub. 2004/0028241 (“Gleissner”);
4. Claims 7, 8, and 11 are alleged to be obvious over Strub in combination with U.S. Patent 5,479,351 (“Woo”);
5. Claims 7, 8, and 11 are alleged to be obvious over Strub in combination with Nagai and Woo;
6. Claims 7, 8, and 11 are alleged to be obvious over Strub in combination with Gleissner and Woo;
7. Claims 12, 14, and 15 are alleged to be anticipated by Strub; and
8. Claims 12, 14, and 15 are alleged to be obvious over Strub and International Pub. WO 2004/091219 (“Wood”).

IV. CLAIM CONSTRUCTION.

The appropriate context to read a claim term includes both the specification and the claim language itself. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). If a term is “used differently by the inventor,” he may provide a special

definition if he does so with “reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

a. local audio data ... is combined with said remote audio data (independent claim 12).

The claim limitation “said local audio data ... is combined with said remote audio data” is recited in independent claim 12. This claim limitation along with the limitations relating to the “local audio data” and the “remote audio data” require that (i) local audio generated by a performer is stored in a local audio device as local audio data, (ii) the same local audio is transmitted to a remote recorder or receiver, (iii) the same local audio is remotely recorded at the recorder or receiver as remote audio data, and (iv) that the local audio data is combined with the remote audio data. Ex. 2111, ¶ 15.

This claim construction is consistent with the claim language itself. Claim 12 explicitly recites that the “local audio data is retrieved during or subsequent to said audio event and is combined with said remote audio data.” Ex. 1001, 26:11-13. Claim 12 also requires both the “local audio data” and the “remote audio data” to originate from the “local audio generated by at least one performer.” *Id.* at 26:1-2. In particular, claim 12 recites “transmitting said local audio ... to ... a recorder, a receiver and combinations thereof” (*id.* at 26:3-5) and “remotely recording said transmitted local audio via ... a recorder, a receiver, and combinations thereof as remote audio data.” *Id.* at 26:8-10. Claim 12 also recites “locally recording said

local audio as local audio data in at least one memory of at least one local audio device.” *Id.* at 26:6-7.

Patent Owner’s proposed construction is also consistent with the Specification. In step 608 of the “process for recording audio and for replaying and re-recording segments of missed audio” (*id.* at 3:57-59), the “[l]ocal audio devices record audio and transmit to receiving equipment in real time.” *Id.* at FIG. 6. If audio replay is initiated, the “[l]ocal audio devices process [a] playback command and synchronize playback to the time code reference contained in the playback command and transmit synchronization data to receiving equipment.” *Id.* at FIG. 6, step 614. Next, the “local audio devices transmit stored audio, which is simultaneously recorded by the receiving equipment, starting at the time specified in the playback command.” *Id.* at FIG. 6, step 616. The “local audio devices continue to replay audio while the receiving equipment re-records the audio.” *Id.* at FIG. 6, step 618.

In the Institution Decision, the Board stated that it does not agree that the claim limitation “requires replacing the remotely recorded audio data with local audio data.” Paper No. 12, p. 7 (emphasis omitted). But the important aspect of Patent Owner’s proposed claim construction (as clarified in this response) is ***what*** data is combined. Specifically, both the claim language itself and the Specification require (1) the same audio data to be (i) stored at the local audio device (as “local

audio data”) and (ii) transmitted to and recorded at the remote recorder (as “remote audio data”) and (2) the “the local audio data” and the “remote audio data” to be combined.

Both the claim language itself and the Specification support Patent Owner’s proposed construction.

b. Wearable by a creator of said locally generated audio (independent claim 7).

The claim limitation “wearable by a creator of said locally generated audio” is recited as a qualifying phrase for a “local audio device” in independent claim 7. In other words, claim 7 imposes the requirement of being “wearable by a creator of said locally generated audio” on a “local audio device.”

An electronic device (*e.g.*, a local audio device) would have been considered to be “wearable” if it were “suitable and in a condition to be worn” (Ex. 2110, p. 1628). For example, a “wearable computer” is “a computer small enough to be worn as a fashion accessory.” *Id.* Petitioner’s expert, Mr. Tinsman, testified that a wearable electronic device like a bodypack is “[s]omething relatively small and lightweight. Something you could wear.” Ex. 2109, p. 41. Mr. Tinsman consistently testified that a device would be considered to be “wearable” if it were “something that was straightforward to carry on your person” and “designed to be worn on the body” (*id.*) and “unobtrusive, easily hidden.” *Id.* at 47. Claim 7 of the ‘902 patent recites the term “wearable” with respect to a “creator of said locally

generated audio” Accordingly, the ordinary meaning of wearable as understood by a person of ordinary skill in the art in the context of the claimed invention of the ‘902 patent is “small, lightweight, unobtrusive, easily hidden, not visible, and designed to be worn on the body of a creator of audio (*i.e.*, performer).” Ex. 2111, ¶ 15.

Patent Owner’s proposed construction of the claim term “wearable” is also consistent with the Specification of the ’902 patent, which repeatedly describes the local audio device as being suitably worn on the body of a creator of audio (*i.e.*, a performer):

Such wireless transmitters may take the form of body packs that are worn by each performer (Ex. 1001, 1:51-53);

Such audio devices may be manufactured in the form of body-packs, such as those typically worn by news announcers, performers, and the like (Ex. 1001, 8:65-67); and

In one aspect of the present invention, local control unit 310 receives recordable audio from local audio input device 312, which may be worn by the performer and connects to local audio device 102 at local audio input device port 314 (Ex. 1001, 10:7-11).

Clearly, Patent Owner’s proposed construction is consistent with the ordinary meaning of “wearable by a creator of said locally generated audio” as understood by one of ordinary skill in the art, and the Specification of the ‘902 patent.

c. Master timecode generator for generating a plurality of master timecodes (independent claim 7).

The claim limitation “master timecode generator” should be construed as “a producer of a plurality of master timecodes controlling other timecode generators.” The claim limitation “master timecodes” should be construed as “codes synchronizing audio samples.”

This proposed construction is consistent with the meaning of the claim limitation itself. The claim term “master” means “[one] that has control over another or others.” Ex. 2084, p. 835, The American Heritage Dictionary, Third Edition, Houghton Mifflin Company, 1993.

The plain meaning of these claim limitations are confirmed by the Specification of the ‘902 patent. The Specification explains that a master timecode (i) is used to control the local timecode generator and (ii) produces master time codes controlling other time code generators:

Referring now to FIG. 5, the feedback loop algorithm begins at 502.

At 504, the current local timecode is retrieved from the timecode generator such as local timecode generator 304 and is written to the variable TCgen. Process 500 proceeds to 506. At 506, the current master timecode is retrieved from the RX buffer of the local receiver and is written to the variable TCrx and process 500 proceeds to 508.

At 508, variable TCdiff is calculated by subtracting TCrx from

TCgen. Process 500 then proceeds to 510, at which process 500 compares TCdiff to zero. If, at 510, TCdiff is less than Zero, process 500 proceeds to 512, at which the feedback error voltage supplied to the local oscillator's DAC by the local control unit is increased above the previously supplied feedback error voltage. The local oscillator's DAC then supplies the new feedback error voltage to the local oscillator, which, in turn, supplies a new clock input voltage to the local time code generator and a new sample rate input to the ADC. In this manner, the speed of the local timecode generator and the sample rate of the ADC are increased to maintain synchronization with the master timecode generator.

Ex. 1001, '902 patent, col. 15, ll. 10-29. The Specification further explains that the master timecodes synchronize the audio data recorded at various components of a recording system:

Since the local audio device and recorder timestamps are synchronized, the replayed audio may be inserted in the proper time sequence with respect to the other recorded audio samples based upon the synchronized timestamp data. Synchronization is essential to ensure that each performer's audio is synchronized with all other performers' audio and to ensure that the newly recorded replayed

audio is in the correct sequence with respect to the previously recorded live audio (Ex. 1001, 5:7-14);

When recording system 100 is operating in a synchronous mode, transmission of the master time reference signal ensures that all of the components of recording system 100 store all locally recorded audio with timestamps that are highly accurate as compared to the timestamps of all other local audio devices 102 and/or all other components of recording system 100. The timestamps are then used during playback and recording to ensure that the replayed audio from all local audio devices 102 is synchronized with previously recorded audio and with the audio replayed by all other local audio devices 102 (Ex. 1001, 6:27-37);

The timestamps may be generated based upon timecodes created by local timecode generator 304 or based upon master timecodes. Such master timecodes may be received using a plurality of methods or components including, but not limited to, wirelessly from a master timecode source through local receiver 302, from a timecode source connected to local audio input device port 314, and from local audio input device 312 wherein the master timecodes are received from an ultrasonic signal. Local timecode generator 304 may be synchronized

with the master timecode generator during recording of the audio event as described in further detail below with respect to FIG. 5 (Ex. 1001, 10:20-32);

During synchronous operation of recording system 100, a portion of the received data may be used to synchronize local timecode generator 304 to the master time code generator integral to one of the components of recording system 100 (e.g., RCU 104, recorder 108, etc.) (Ex. 1001, 10:56-61);

At 410, the local control unit reads the master timecode contained in the RX buffer and jam synchronizes the local timecode generator with the master timecode. The jam sync synchronizes the local audio device with the RCU while allowing the local audio device to supply its own timecode. Local supply of synchronized timecodes ensures proper timing during periods in which the master timecodes cannot be read (e.g., the RCU is temporarily unstable, wireless communication dropouts, etc.) (Ex. 1001, 14:9-17); and

At 604, a master unit, such as RCU 104, receiver 106, or recorder 108 transmits master timecodes to each local audio device, and process 600 proceeds to 606. At 606, each local audio device synchronizes (e.g., jam syncs) its respective on board local timecode generator with

the master timecodes received from the master unit, thereby synchronizing all local audio device timecode generators with the master timecode generator contained within the master unit (Ex. 1001, 16:30-37).

Clearly, both the claim language itself and the Specification support Patent Owner's proposed construction.

V. The Petitioner Failed To Demonstrate By A Preponderance Of The Evidence That Claims 12, 14 and 15 Are Anticipated By Strub.

“A claim is anticipated only if *each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.*”³ “The *identical invention must be shown in as complete detail as is contained in the . . . claim.*”⁴ Accordingly, “there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention.”⁵ The test of anticipation is a strict one -

³ *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) (emphasis added), *see also* MPEP § 2131.02.

⁴ *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) (emphasis added).

⁵ *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991).

...Continued

identity of invention. This test requires all claim limitations in a single reference, arranged in the same way as in the claim.⁶

Contrary to Petitioner’s allegation, Strub does not anticipate claims 12, 14, and 15 of the ‘902 patent because it does not disclose all the claim requirements of independent claim 12. Under the proper construction, claim 12 requires (1) the same audio data to be (i) stored at the local audio device (as “local audio data”) and (ii) transmitted to and recorded at the remote recorder (as “remote audio data”) and (2) the “the local audio data” and the “remote audio data” to be combined. *Supra*, § IV.

Strub does not satisfy these requirements. Rather, as noted by the Board, “Petitioner argues that Strub discloses ‘the recording units timestamping the recorded audio and synchronizing recordings from **multiple recording units** using those timestamps in post-processing.’” Institution Decision, Paper 12, p. 30 (*emphasis added*), citing Petition, p. 47 (citing Ex. 1003, 12:4–39, 66:7–25, Fig. 3).

But there is no disclosure in Strub that the data from the multiple recording units that is allegedly combined satisfies the requirements of claim 12. In particular, there is no disclosure in Strub that any audio data that is both (i) stored at the local audio device (as “local audio data”) and (ii) transmitted to and recorded

⁶ *Finisar Corp. v. Direct TV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir. 2008).

at the remote recorder (as “remote audio data”) is later combined. In contrast, Strub discloses that different audio data from different recording units or data acquisition devices are combined. Ex. 1003, 13:50-67. Indeed, Petitioner’s expert Mr. Tinsman admitted that Strub discloses “combining the *different audio data* from the different recording units.” Ex. 2109, 55:3-7 (*emphasis added*). Strub’s disclosure is in sharp contrast to combining the *same audio data* which was stored and transmitted by the local audio device, as claimed in the ‘902 patent.

As explained by Mr. DeFilippis, “[t]he mere transmission of data from one location to another and its subsequent retrieval does not nearly satisfy the claim requirements that the same local audio is stored at both the local audio device as local audio data and the remote receiver/recorder as remote audio data and that the local audio data is combined with the remote audio data.” Ex. 2111, ¶ 21. “A mere multi-track recording (combining multiple tracks of audio onto a single media) also does not satisfy these claim requirements.” *Id.* Petitioner failed to identify the two different devices in Strub that allegedly correspond to the claimed local audio device and remote receiver/recorder or the audio data in Strub that allegedly corresponds to the claimed local audio. *See e.g.*, Petition, pp. 27, 44. Petitioner also failed to identify the data in Strub that allegedly correspond to the claimed local audio data at the local audio device and the claimed remote audio

data at the remote receiver/recorder or that the data from these two different devices is combined. *See id.*

Indeed, as explained by Mr. DeFilippis, Strub discloses blending (e.g., mixing) of data from **multiple, different** data acquisition devices (Ex. 2111, ¶ 23):

It may be particularly desirable and most feasible-to blend audio recordings obtained by multiple data acquisition devices that are part of the same recording unit. It may also be possible to blend audio recordings obtained by multiple data acquisition devices that are part of the different recording units. However, in the latter case, during some or all of an event recorders may be sufficiently far removed from each other that their recording units acquire audio recordings including audio content that is so different that the audio content cannot be blended in a meaningful way.

Ex. 1003, 92:24-27. “The disclosed “blending” (e.g., mixing) of **different data** from **different data acquisition devices** is very different from the requirements of claim 12 which require the **same audio data** to be (i) received and stored locally, (ii) transmitted and stored remotely, and (iii) then combined.” Ex. 2111, ¶ 23.

Accordingly, Strub does not anticipate claim 12, or the challenged claims dependent therefrom (*i.e.*, claims 14 and 15). *Id.*

Accordingly, Petitioner did not demonstrate by a preponderance of the evidence that Strub anticipates claims 12, 14, and 15.

VII. The Petitioner Failed To Demonstrate By A Preponderance Of The Evidence That Any Of The Challenged Claims Would Have Been Obvious On Any Instituted Ground.

As set forth by the Supreme Court, the question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); *see also KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 399 (2007). A petitioner seeking to invalidate a patent as obvious must demonstrate 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.”⁷ The Petition’s evidence must also address every limitation of every challenged claim.

Petitioner cannot prevail on any claim on any of the instituted obviousness grounds because (i) the Petition failed to demonstrate that one of ordinary skill in the art would have been motivated to combine the teachings of the numerous prior art references in the combination to achieve the claimed invention with a

⁷ *OSRAM Sylvania, Inc. v. Am. Induction Techs., Inc.*, 701 F.3d 698, 706 (Fed. Cir. 2012).

reasonable expectation of success, (ii) the Petition failed to demonstrate that any of the different combinations teaches every element of any of the challenged claims, and; (iii) there are objective indicia of non-obviousness including satisfaction of a long felt need and industry praise and recognition.

1. Strub Would Not Have Taught That The Same Local Audio Is Stored At Both A Local Audio Device As Local Audio Data and A Remote Receiver/Recorder As Remote Audio Data and That The Local Audio Data Is Combined With The Remote Audio Data, As Required By Independent Claim 12.

As explained above, claim 12 — as properly construed — requires that (i) local audio generated by a performer is stored in a local audio device as local audio data, (ii) the same local audio is transmitted to a remote recorder or receiver, (iii) the same local audio is remotely recorded at the recorder or receiver as remote audio data, and (iv) that the local audio data is combined with the remote audio data. *Supra*, § IV.a. And as explained above, Strub would not have taught these claim requirements. *Supra*, § VI.

Accordingly, Petitioner did not demonstrate by a preponderance of the evidence that claim 12 (or claims 14 and 15 dependent therefrom) would have been obvious over Strub alone.

2. The Combination of Strub and Wood Not Have Taught That The Same Local Audio Is Stored At Both A Local Audio Device As Local Audio Data and A Remote Receiver/Recorder As Remote

Audio Data and That The Local Audio Data Is Combined With The Remote Audio Data, As Required By Independent Claim 12.

As explained above, Strub would not have taught the claim requirements of claim 12 shown above. *Supra*, § VI. And Wood (the only other reference relied upon by Petitioner for these requirements) does not compensate for the deficiencies of Strub. The portions of Wood cited by Petitioner (Petition, p. 48, *citing* EX1008 (Wood), 1:31-2:13) are not nearly sufficient to show that Wood would have taught these requirements when combined with Strub. Rather, Wood discloses “receiving a broadcast signal via a first communication channel ... monitoring the broadcast signal to ascertain when the signal is corrupted, requesting via a second communication channel replacement portions, receiving the replacement portions, and combining the replacement portions with the received broadcast signal.” Ex1008, p. 3, l. 1 – p. 4, l. 5. As explained by Mr. DeFilippis, “[t]he mere disclosure of combining a broadcast signal transmitted on one channel with a replacement signal transmitted on another channel does not nearly satisfy the claim requirements that (i) local audio generated by a performer is stored in a local audio device as local audio data, (ii) the same local audio is transmitted to a remote recorder or receiver, (iii) the same local audio is remotely recorded at the recorder or receiver as remote audio data, and (iv) the local audio data is combined with the remote audio data. Ex. 2111, ¶ 33. Petitioner failed to identify the two different devices in Wood that allegedly correspond to the claimed local audio device and

remote receiver/recorder or the audio data in Strub that allegedly corresponds to the claimed local audio. *See e.g.*, Petition, pp. 47-48. Petitioner also failed to identify the data in Wood that allegedly correspond to the claimed local audio data at the local audio device and the claimed remote audio data at the remote receiver/recorder or that the data from these two different devices is combined. *See id.* As also explained by Mr. DeFilippis, Wood disclose “splicing” of data, which “is very different than (i) locally recording local audio at a local audio device (ii) transmitting and remotely recording the same local audio to a remote recorder and (iii) combining the audio data from the local audio device and the remote recorder, as required by claim 12 of the ‘902 patent.” Ex. 2111, ¶ 35. Splicing can be done only on an MPEG packet boundary, in contrast to the claimed invention of the ‘902 patent which can replace any portion of the remotely recorded audio with the locally-recorded audio. *Id.* “Also, there is no local recording device in Wood. The recording device in Wood is remote from the source of the original audio signal. A server is at the local end, not a recorder.” *Id.*

Accordingly, this claim limitation is wholly absent from the combination of Strub and Wood. When a claim limitation is wholly absent from the teachings of the prior art, documentary evidence is required to establish obviousness. *K/S HIMPP v. Hear-Wear Technologies, LLC*, 751 F.3d 1362, 1366 (Fed. Cir. 2014) (“an assessment of basic knowledge and common sense as a replacement for

documentary evidence for core factual findings lacks substantial evidence support.”). There is no documentary evidence in the record indicating that the claim limitation that is wholly absent from Strub and Wood would have been obvious. Petitioner’s assertion that “the technique of replacing a dropout with backup data was well known in the art” (Petition, p. 49) is a red herring, meant to detract from its failure to show that the combination of Strub and Wood would have taught the particular method that is recited in claim 12 of the ’902 patent.

Accordingly, Wood would not have taught the requirements of independent claim 12 when combined with Strub and therefore, the combination does not render obvious these independent claims, or the claims dependent therefrom (*i.e.*, claims 14 and 15). Thus, Petitioner did not demonstrate by a preponderance of the evidence that any claim of the ’902 patent would have been obvious over Strub and Wood (*i.e.*, Ground 8).

3. The Petitioner Failed To Show That A POSA Would Have Been Motivated To Modify Strub With Wood To Achieve The Particular Invention Recited In Independent Claim 12 and Dependent Claims 14 ad 15 With A Reasonable Expectation Of Success.

The Petition’s motivation to combine is rooted in forbidden hindsight analysis that is based on its incorrect assumption regarding the level of ordinary skill in the art. The Petitioner failed to provide any evidence whatsoever that combining the various portions of Strub and Wood would achieve the particular

system or method that, *inter alia*, (i) local audio generated by a performer is stored in a local audio device as local audio data, (ii) the same local audio is transmitted to a remote recorder or receiver, (iii) the same local audio is remotely recorded at the recorder or receiver as remote audio data, and (iv) the local audio data is combined with the remote audio data (*supra*, § IV.a), as required by independent claim 12 and claims 14 and 15 dependent therefrom. *See e.g.*, Petition 47-48; Ex. 2111, ¶ 38.

Petitioner makes only a conclusory argument that a POSA would have been motivated to modify Strub because Strub discloses that “during an event, the recording obtained by a particular recording unit will be deficient in some way.” Petition, p. 48, *quoting* EX1003, 48:18-30, 85:28-41.

But Petitioner does not identify what problem was unresolved in Strub that is solved by changing its system.⁸ As explained by Mr. DeFilippis, “it is unclear how the teachings of Strub and Wood could be combined in the manner suggested by the Petitioner to achieve the claimed invention with a reasonable expectation of

⁸ *See* Petition, p. 47; *see also Heart Failure Techs.*, IPR2013-00183, Paper 12, at 9 (finding Petitioner’s assertion that references concerned the same field did not amount to an “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

success because the references disclose methods that substantially differ from each other and the method of the claimed invention.” Ex. 2111, ¶ 39. As explained above, the claimed method of the ‘902 patent stores the same local audio at both the local audio device as local audio data and the remote receiver/recorder as remote audio data and combines the local audio data with the remote audio data.

In sharp contrast as acknowledged by Petitioner, Strub discloses a global positioning system (GPS) time stamp and “allows the local audio data to be retrieved by transmitting the data to other devices via transmitter 309 or wired connections, such as USB.” Petition, p. 47, *citing Strub*, 12:4-39, 66:7-25, Fig. 3. And Wood also differs substantially from both the claimed invention of the ‘902 patent and Strub. It discloses combining a broadcast signal transmitted on one channel with a replacement signal transmitted on another channel. Indeed, it is Mr. DeFilippis’s “opinion that a person of ordinary skill in the art would not have been motivated to combine them, since they use different approaches, and it is not clear that the outcome improves anything.” Ex. 2111, ¶ 42.

For Strub to operate, it would need to transmit and receive at the same time (i.e., “Full duplex operation” transmitting and receiving multiple channels of audio and video simultaneously from multiple back packs). Wood requires a full duplex back channel to eliminate missing data. Strub does not incorporate a separate duplex channel to request missing data and receive the replacement data. Further

Wood describes the backchannel as a fixed wired connection, which would make Strub unsuitable for its intended application.” Ex. 2111, ¶ 43.

When the Board considered this very same type of unsupported argument for combining the teachings of different systems from different prior art references in *Epistar v. Boston University* (IPR2013-00298), it declined to institute the IPR.⁹ There, the Board reasoned that “Petitioner identifies no objective evidence — for example, experimental data — tending to establish the structure of a GaN buffer layer grown under Manabe’s process conditions.”¹⁰ Here, as in *Epistar*, the Petitioner failed to provide experimental data or other objective evidence indicating 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.”¹¹

Indeed, Wood is non-analogous art to the claimed invention. *In re Bigio*, 381 F.3d 1320, 1325, 72 USPQ2d 1209, 1212 (Fed. Cir. 2004). A reference is

⁹ *Epistar, et al. v. Trustees Of Boston University*, IPR2013-00298, Decision Not To Institute, Paper No. 18 (P.T.A.B. November 15, 2103).

¹⁰ *Id.*

¹¹ *OSRAM Sylvania, Inc. v. Am Induction Techs., Inc.*, 701 F.3d 698, 706 (Fed. Cir. 2012).

analogous art to the claimed invention only if it (i) is from the same field of endeavor; or (2) is reasonably pertinent to the problem faced by the inventor. *See Bigio*, 381 F.3d at 1325, 72 USPQ2d at 1212.

Wood is not in the same field as the claimed invention and is not reasonably pertinent to the problem faced by the inventors of the '902 patent. Wood relates to TV broadcasting and addresses problems with a broadcasting channel using a second channel. Ex. 1008, pp. 3-4. The claimed invention relates to recording the same local data both locally at a local audio device and remotely at a remote receiver/recorder and combining the local and remote data to address transmission problems to the remote receiver/recorder. Ex. 1001, 2:15-33. "A POSA, therefore, would not have looked to Wood to address the problem identified in the '902 patent." Ex. 2111, ¶ 45.

Moreover, "combining Wood with Strub in the manner suggested by Petitioner would have rendered Strub inoperable and unsuitable for its intended purpose." Ex. 2111, ¶ 47. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, there cannot be a suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Strub discloses that video/audio may be recorded and transmitted between users to allow them to view a collective display of the video/audio being recorded

while simultaneously experiencing the live event. Ex. 1003, 12:49-52. The method of Wood for repairing dropouts requires that substantial delays be introduced, which would result in various portions of the display being delayed. Ex. 1008, p. 2, l. 31 – p. 3, l. 8. Further, the delay would be different for each user (as each user would be exposed to different interference characteristics depending on the environment between him/her and a recording user), resulting in various different delays for various portions of the display. *Id.* at p. 3, l. 30 – p. 4, l. 3. “Strub requires near instantaneous reception of distant signals (low latency) so that the ‘recorder’ can synchronize the received signals (local or distant) to record.” Ex. 2111, ¶ 47; Ex. 1003, 38:29-34. “Strub goes further and recognizes the need to assess both local and remote audio and decide in real time which to record.” Ex. 2111, ¶ 47, Ex. 1003 87:22-26. “Wood requires a delay at the receiver to allow time to request a replacement of the corrupted data (audio and video).” Ex. 2111, ¶ 47, Ex. 1008, 2:31-32, 3:1-4. “This completely defeats the purpose of Strub’s display embodiment, which is to allow a recorder to access what other recorders are recording synchronized in real time.” Ex. 2111, ¶ 47. Indeed, Petitioner’s expert Mr. Tinsman agreed that Wood requires a delay “to allow time to receive the lost video and audio.” Ex. 2109, 96:12-13.

The recorders in Strub record streams independently. Ex. 1003, 85:18-26. The system makes a determination of which of multiple streams (from multiple

users) is of the most interest at any particular time and records that stream. Ex. 1003, 86:60 – 87:5. “In other words, in Strub the recorder is constantly multiplexing between different streams of video/audio to create a single seamless recording of content that is most interesting to that recorder. But the delays required by Wood would prevent a recorder in Strub from making a selection in real time because the recorder would have to wait for the completion of the delay before a determination by the recorder of which stream is the most interesting to record. Further it would be too late to record the desired stream in the proper sequence.” Ex. 2111, ¶ 48. In other words, the Strub system needs to determine which of multiple streams to record in real time while they are being transmitted from other users. Ex. 1003, 86:60 – 87:5. “Delays (potentially different delays for each stream) would make this selection impossible to achieve in a proper recorded sequence.” Ex. 2111, ¶ 48.

The delay required by Wood is controlled by a broadcaster. Ex. 1008, p. 8, ll. 1-4. The delay is variable, subject to change over time, and depends on such things as the weather. *Id.* “If the Wood dropout solution were implemented in Strub, each user would have to continuously monitor the environment (*e.g.*, obstacles in the way, weather, proximity to radio towers, etc.), estimate the probability and extent of interference likely to be caused by the environment, and then continually adjust and send delay commands to other participants’ systems

that would allow those systems to incorporate a sufficient delay to account for the estimated interference. This is totally impractical and contradicts one of the primary purposes of Strub, which is to permit “low attention recording” of an event (*i.e.*, recording that does not inconvenience or otherwise require the attention of those in the recording environment).” Ex. 2111, ¶ 49, *citing* Ex. 1003, 4:21-31. As explained by Mr. DeFilippis, “Wood’s broadcast system must operate within a finite short time period (*i.e.*, a maximum of a few seconds). In contrast, the claimed system of the ‘902 patent can repair a drop out at any time after the original recording because its system is completely different than Wood’s broadcast system.” *Id.* Clearly, combining Wood with Strub would also have rendered Strub unsuitable for its intended purpose.

The recording device of Wood requests retransmission of corrupted portions of a broadcast via a fixed line back channel, thereby ensuring that the request is not corrupted by the same interfering characteristics that plague the broadcast channel. Ex. 1008, p. 4, ll. 24-30. “Using such a fixed line back channel solution in Strub would be impractical, as it would require multiple participants recording an event to connect to one another via wired connections. Wood teaches that the request for the replacement data as well as the delivery of the replacement data be sent over a separate, fixed line, connection.” Ex. 2111, ¶ 50. This would not be possible in

Strub due to the mobility of the recorders. Ex. 2111, ¶ 50; Ex. 1008 2:24-25, 3:1-4; Ex. 1003, 63:1.

Moreover, a “POSA would not have been motivated to use a wireless channel instead for the retransmission because using a wireless channel for broadcast and another wireless channel for retransmission in the same environment between the same two endpoints (*i.e.*, two participants recording the same event from different vantage points) would subject both channels to the same interference. This would result in an inoperable system for correcting dropouts.” Ex. 2111, ¶ 50.

A POSA would not have been motivated to combine Strub and Wood because Strub already discloses a solution to the interference and dropout problem (*i.e.*, participants share their locally recorded audio after a recorded event). Ex. 1003, 5:55-61. “Therefore, applying the Wood solution in post-production in Strub would have been unnecessary. A POSA would not have been motivated to change Strub’s simple system with a complex technical solution requiring multiple transmitters and receivers, delay circuitry, commands and requests, etc., especially because doing so would dramatically increase the size, weight and battery requirements of the backpack (Ex. 1003 16:51-53), making the Strub backpack unwieldy, cumbersome and impractical for its intended use for ‘low attention recording.’” Ex. 2111, ¶ 51.

As further explained by Mr. DeFilippis, the broadcast signals of Wood are very different than signals sent in Strub:

Digital broadcast signals are heavily compressed audio and video data signals, and require synchronization, timing and other information to be interleaved in the broadcast signal. To use a digital broadcast type signal in Strub would not have been contemplated because of the additional processing required (requiring additional power and adding to the heat load) as well as the complexity of the process of splicing the data at the receiver as opposed to combining or mixing baseband audio and video signals as in Strub.

Ex. 2111, ¶ 51. As also explained by Mr. DeFilippis, “large compression ratios used in digital broadcasting, produce “lossy” signals (Ex. 1003, 28:32-36), which reduces the fidelity of the recordings as a “record” of the event.” Ex. 2111, ¶ 51; Ex. 1003, 38:24-28.

In the Institution Decision, the Board stated that “Wood discloses video and audio data being sent to a recorder” (Paper, No. 12, p. 36) and that “Wood discloses a local recording, remote recording, and combining the two through steps to ‘fix a defect or gap in a remote recording, a problem Strub recognizes, with the local copy of that recording in postprocessing.’” *Id.* at 36-37 (*citations omitted*). But the Board is mistaken; Wood discloses a server, not a recorder. Ex. 1008, 4:7-

8. In particular, “Wood’s server provides requested short video and audio streams to a distant receiver.” Ex. 2111, ¶ 51. “In Strub, the audio and video signals are live and unpredictable and Strub’s recording includes signals from multiple sources and therefore, is not sequential like the data in Wood.” *Id.*, citing Ex. 1003, 37: 11.

In addition, Wood does not disclose post-event processing in the manner disclosed by Strub. In Strub, the post–event processing occurs *after* the events have happened, when all recordings are available. Wood does not disclose post-processing in the manner disclosed by Strub. Ex. 2111, ¶ 51, citing Ex. 1003, 86:57- 87:5. In Wood, the processing *during* a fixed and certain time delay during which the corrupt signal is detected, a request is sent to the sending end, and the replacement data is returned. Ex. 2111, ¶ 51, citing Ex. 1008, 2:31 – 3:6.

Accordingly, combining Wood’s teachings with Strub in the manner suggested by Petitioner would have rendered Strub inoperable and unsuitable for its intended purpose:

1. A fixed delay would need to be added at Strub’s receiver/recorder to allow time for the request and the transmission of replacement data;
2. A fixed line hard wired, bi-directional communication channel would need to be added to Strub’s receiver/recorder;

3. Significant processing would be required to provide a compressed digital broadcast type data stream (MPEG2), which would increase the complexity and heat of Strub's recorder and would reduce the battery life.

Ex. 2111, ¶ 51.

Thus, a POSA would not have achieved the claimed invention of the '902 patent with a reasonable expectation of success by combining the teachings of Strub and Wood in the manner suggested by Petitioner. For these additional reasons, Petitioner did not show by a preponderance of the evidence that claims 12, 14, or 15 would have been obvious.

4. Strub Would Not Have Taught “at least one local audio device wearable by a creator of said locally generated audio,” As Recited In Independent Claim 7 Of The ‘902 Patent.

Strub does not disclose “at least one local audio device wearable by a creator of said locally generated audio,” as recited in independent claim 7. Petitioner asserted that in Strub, a “recorder 850 is wearing the recording unit 800.” Petition, p. 19, quoting Ex. 1003, 72:10-19. But the claim limitation “wearable by a creator of said locally generated audio,” means “small, lightweight, unobtrusive, easily hidden, not visible, and designed to be worn on the body of a creator of audio (i.e., performer).” *Supra*, § IV. And the mere fact that Strub states that its recording

device is wearable by a person recording audio and video, does not mean that the device is wearable by a creator (*e.g.*, performer) of audio. Unlike a person who is merely recording, a performer must move as he or she is talking, singing, or dancing. Strub does not disclose that its recording unit is small and light enough to be wearable by a person who must move while talking, singing or dancing. Indeed, it would be unusual or extreme for a performer to wear a larger device recording both audio and video as disclosed in Strub while performing. Ex. 2111, ¶ 52.

As explained by Mr. DeFilippis, “Strub describes a system that selects the most interesting content to record. The method of determining this is not specified. To do so would require a computer that could compare content from multiple mpeg sources in real time and multiplex the results to a recording. The hardware and software to do this could not be incorporated into a device that is wearable.” Ex. 2111, ¶ 52. “Strub could also never fit into a back pack because of the multiple MPEG encoders and decoders required just to implement Strub in the digital domain. A backpack is not suitable in any way shape or form to be utilized as a bodypack transmitter.” *Id*

5. The Combinations Of Strub And The Secondary References Would Not Have Taught “at least one local audio device wearable by a

creator of said locally generated audio,” As Recited In Independent Claim 7 Of The ‘902 Patent.

As explained above, Strub would not have taught the claim limitation quoted above. § VII.4, *supra*. And Petitioner did not allege that any of the secondary references (*i.e.*, Nagai, Gleissner, and Woo) would have taught reducing the size of Strub’s recorder. *See* Petition, pp. 19-41. For this reason, Petitioner did not demonstrate by a preponderance of the evidence that independent claim 7 (or claims 8 and 11 dependent therefrom) would have been obvious over Strub in combination with any of the secondary references.

6. Strub Would Not Have Taught A Wearable Local Audio Device Having The Structure And Capabilities Recited in Independent Claim 7.

Independent claim 7 recites:

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

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 and said master timecodes;

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

at least one memory;

at least one timecode generator for generating a plurality of
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 and storing said stamped local audio data in
said memory.

Ex. 1001, 24:55-25:2. That is, claim 7 requires the control unit to be electrically
coupled to four different components within a wearable local audio device so as to
create and store stamped local audio data (which includes a “local timestamp” (id.
at 25:3-4).

Strub does not disclose the particular electrical coupling of components
within a wearable local audio device as required by independent claim 7.

Petitioner relied upon FIG. 3 and the associated text for this claim limitation.

Petitioner, pp. 35-36. “But FIG. 3 does not show any electrical coupling between
any components.” Ex. 2111, ¶53. Rather, “FIG. 3 is a block diagram illustrating
the *functional* components of another recording unit.” Ex. 1003, 7:44-46
(*emphasis added*). “The associated text in Strub relied upon by Petitioner (e.g.,
Ex. 1003, 12:4-13, 13:36-14:13, 11:32-56, 12:4-13, 13:36-14:13, 66:7-25, 70:1-5,
31:51-59), is silent as to any electrical coupling between any components of the

recorder.” Ex. 2111, ¶53. For this reason alone, Petitioner did not demonstrate by a preponderance of the evidence that claim 7 or claims 8 and 11 dependent therefrom are obvious over Strub.

In addition, Strub would not have taught a master timecode generator for generating a plurality of master timecodes; a local audio device receiver for receiving said master timecodes; an audio input device, a timecode generator for generating a plurality of timecodes; a memory and a control unit electrically coupled to said local audio device receiver, said audio input device, said memory and said local timecode generator for creating and storing said stamped local audio data in said memory, as required by claim 7. Petitioner alleged that the timecodes limitations recited above would have been taught by “a GPS satellite that provides time signals.” Petition, p. 22. But as explained above, the claim limitation “master timecode generator” should be construed as “a producer of a plurality of master timecodes controlling other timecode generators.” § IV.b, *supra*. In addition, the claim limitation “master timecodes” should be construed as “codes synchronizing audio samples.” *Id.* And as explained by Mr. DeFilippis, “[t]here is no teaching that Strub’s system uses a GPS satellite time signal to produce codes synchronizing audio samples via the control of other (slave) timecode generators.” Ex. 2111, ¶ 54.

More particularly, none of the portions of Strub cited by Petitioner (*i.e.*, Petition, p. 22 *citing* Ex. 1003, 79:54-80:7, 62:53-55, 63:12-60, 29:58-62, 33:33-

52, 75:47-51, 63:41-49) would have taught that Strub's system uses a GPS satellite to produce timecodes to control other timecode generators. Although Strub discloses that "the clocks of different recording units may not be adequately synchronized to enable use of the time-stamps associated with the recordings obtained from different recording units to synchronize those recordings" (Ex. 1003, col. 79, l. 66 – col. 80, l. 2), it does not disclose that synchronization between different recording units is achieved with a master timecode generator that produces timecodes to control other timecode generators. *See e.g., id.* at 79:54-80:7. Rather, Strub teaches that "either the content of visual recordings or the content of audio recordings (or both) can be used to establish synchronization between the recording data obtained by different recording units." *Id.* at 80:13-16. Strub explains how overlapping recordings from different recording units can be used to establish synchronization:

For example, when two different visual recordings capture (at least in part) the same content, that overlapping visual content can be used to synchronize the visual recordings. During display of the visual recordings, one of the visual recordings can be paused while content is being displayed that is known to also be present in the other visual recording. The display of the other visual recording can then be moved either forward or backward in time until the same content is

displayed in that visual recording. The locations within each visual recording can then be marked as occurring at the same time, thus synchronizing the visual recordings ... when visual recordings include overlapping content, it is typically preferable to use the visual recordings to synchronize the recording data.

Id. at 80:17-37.

Many of the portions of Strub cited by Petitioner relate to the use of GPS satellites only to determine the position of a recorder (not for time synchronization):

For example, when the position sensing device is a GPS receiver, as described further below, location is specified in global coordinates (62:53-55);

A global positioning system (GPS) receiver can be used, for example, to embody a position sensing device of a recording unit according to the invention that enables determination of the location of the recording unit ... If the event is one that takes place in a building or other environment (such as a high mountain or a city with tall buildings) in which the recorder may be shielded from GPS satellites, the GPS receiver(s) will be ineffective to establish the location of the recording unit. In such a situation, it is necessary to make use of an alternative position sensing system if such information is necessary or desirable (63:12-40).

Although Strub also discloses that a GPS time signal may be used, this GPS time signal is itself used as a clock to produce time stamps:

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. 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.

Id. at 63:40-49. Indeed, Strub explicitly discloses that “the recording units may not include clocks for enabling time-stamping of the recordings.” *Id.* at 80:8-10.

Accordingly, as explained by Mr. DeFilippis, “Strub’s disclosed use of a GPS time signal as a clock for recording units is very different than the claimed master timecode generator that controls other timecode generators in the recording units.”

Ex. 2111, ¶ 56.

Significantly, Strub clearly states that a synchronization pulse is used for synchronization, not the time output of a GPS receiver (as mistakenly alleged by Petitioner):

it may be desirable to coordinate the recordings obtained by recording units so that frames of visual recording data obtained by different recording units are temporally synchronized (*e.g.*, so that a frame begins at the same time for each recording unit). This can be

done by transmitting a synchronization pulse from a “master” recording unit to each of the other recording units (“slave” recording units). (Synchronizing analog visual data acquisition devices in this way is referred to as “genlocking.”).

Ex. 1003, 38:30-39.

Strub’s teachings are in sharp contrast with the ‘902 patent, which produces timecodes having sufficient data to synchronize audio segments. Ex. 1001, 5:7-14, 6:27-37, 10:20-32, 10:56-61, 14:9-17, 15:10-29, and 16:30-37. Therefore, as explained by Mr. DeFilippis, “Strub needs to use a synchronization pulse because the output of the GPS receiver is insufficient to achieve synchronization.” Ex. 2111, ¶ 56.

The remaining portions of Strub cited by Petitioner for the “master timecode generator” limitation of claim 7 do not, in fact, relate to the claimed “master timecode generator”; they instead disclose the different types of data that may be stored in recording units. *Id.* at 29:58-62, 33:33-52.

Petitioner’s reliance on Strub’s disclosure of a SMPTE time code input (Petition, p. 22) is also misplaced because “Strub does not disclose that the SMPTE time code input is used to control a timecode generator in a recording unit.” Ex. 2111, ¶ 58. Rather, Strub’s discussion of a SMPTE time code is limited: “SMPTE time code input can be used with professional camcorders or portable

dockable videotape recorders (VTRs), such as the Sony BVV-5 dockable Beta-SP VTR, to enable synchronization with an external device.” Ex. 1003 at 75:47-52.

Strub would not have taught the synchronization with the external device is enabled by controlling a timecode generator with the timecodes produced by a master timecode generator. *See id.* That is, Strub would not have taught the particular claimed system of claim 7 including a “master timecode generator for generating a plurality of master timecodes.” Ex. 1001, 14:51-54.

Clearly, the disclosure of GPS time data and the input of a SMPTE time code is not nearly sufficient to demonstrate that Strub would have taught the claimed master timecode generator that controls other timecode generators, as required by independent claim 7. Accordingly, Petitioner failed to show by a preponderance of the evidence that claim 7 of the ‘902 patent would have been obvious over Strub.

Petitioner did not allege that Nagai, Gleissner, or Wood would have taught the limitations that have been shown to be absent from Strub. *See* Petition, pp. 19-40. Accordingly, Petitioner failed to show by a preponderance of the evidence that claim 7 would have been obvious over the combination of Strub with Nagai, Gleissner, and/or Wood.

7. Strub and Woo Would Not Have Taught A Wearable Local Audio Device Having The Structure And Capabilities Recited in Independent Claim 7.

As explained above, Strub would not have taught the electrical coupling of components or the timecode limitations recited in claim 7 . § VII.6, *supra*. Woo, like Strub, does not include any electrical circuit diagrams showing the electrical coupling of the components. Moreover, Woo (the only other reference relied upon by Petitioner for the timecode requirements) does not compensate for the deficiencies of Strub. Woo’s “master clock” is not the claimed “master timecode generator for generating a plurality of master timecodes.” Ex. 2111, ¶ 59.

As explained above, the claim limitation “master timecode generator” should be construed as “a producer of a plurality of master timecodes controlling other timecode generators.” § IV.b, *supra*. The claim limitation “master timecodes” should be construed as “codes synchronizing audio samples.” *Id.* And as explained by Mr. DeFilippis, “there is no teaching that Woo’s master clock produces codes synchronizing audio samples via the control of other (slave) timecode generators.” Ex. 2111, ¶ 59. Indeed, there is no mention of any such timecode generators in Woo, let alone that they are controlled by Woo’s master clock. *See e.g.*, Ex. 1020, cols. 4-8.

Rather, Woo discloses only that “[t]he clock output 128 is conventionally formatted and structured, and is preferably compatible with present-day

commercially-available equipment that have master clock input ports.” *Id.* at 8:1-4.

As explained by Mr. DeFilippis, “[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’ producing master timecodes synchronizing audio samples via the control of other (slave) timecode generators.” Ex. 2111, ¶ 60. Indeed, Woo clearly states that the time output of a GPS receiver must be combined with a pulse to perform synchronization:

The conventional date and time sentence output of the GPS navigation receiver is combined with a highly-accurate one pulse-per second (it one microsecond) to form a time-keeping base for the time code output (Ex. 1020, 4:16-20); and

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 (Ex. 1020, 8:13-18).

Woo’s teachings are in sharp contrast with the ‘902 patent, which produces timecodes having sufficient data to synchronize audio segments. Ex. 1001, Therefore, as explained by Mr. DeFilippis, “Woo defines a video sync-generator (Ex. 1020 FIG 6 and 9:5-19) for stable frame reference in combination with the

output of the GPS receiver. Using the GPS one pulse-per-second is insufficient to achieve synchronization of the audio samples.” Ex. 2111, ¶ 60.

Accordingly, this claim limitation is wholly absent from the combination of Strub and Woo. When a claim limitation is wholly absent from the teachings of the prior art, documentary evidence is required to establish obviousness. *K/S HIMPP*, 751 F.3d at 1366. There is no documentary evidence in the record indicating that the claim limitation that is wholly absent from Strub and Woo would have been obvious. Petitioner’s assertion that “[i]t would have been obvious to a POSITA to use Woo’s master timecode generator in the system of Strub” (Petition, p. 25) is a red herring, meant to detract from its failure to show that the combination of Strub and Woo would have taught the particular method that is recited in claim 7 of the ’902 patent.

Accordingly, Woo would not have taught the requirements of independent claim 7 when combined with Strub and therefore, the combination does not render obvious this independent claim, or the claims dependent therefrom (*i.e.*, claims 8 and 11). Thus, Petitioner did not demonstrate by a preponderance of the evidence that claims 7, 8, and 11 would have been obvious based on any of its proposed grounds based on Strub and Woo (*i.e.*, Grounds 4-6).

8. The Petitioner Failed To Show That A POSA Would Have Been Motivated To Modify Strub With Woo To Achieve The Particular

Method Recited In Independent Claim 7 With A Reasonable Expectation Of Success.

Petitioner's motivation to combine is rooted in forbidden hindsight analysis that is based on its incorrect assumption regarding the level of ordinary skill in the art. The Petitioner failed to provide any evidence whatsoever that combining the various portions of Strub and Woo would achieve the particular "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 receiver for receiving at least one of the group consisting of digital commands and said master timecodes," (Ex. 1001, 24:51-59) recited in independent claim 7.¹²

The Petitioner did not suggest why a person of skill would drastically change the system of Strub with the system of Woo. Petitioner makes only a conclusory argument that a POSA would have been motivated to "use Woo's master timecode generator in the system of Strub." Petition, p. 25, *quoting* EX1003, 75:25-58.

¹² See e.g., Petition 23-26.

...Continued

But Petitioner does not identify what problem was unresolved in Strub that is solved by changing its system.¹³ As explained by Mr. DeFilippis, “it is unclear how the teachings of Strub and Woo could be combined in the manner suggested by the Petitioner to achieve the claimed invention with a reasonable expectation of success because the references disclose systems that substantially differ from each other and the system of the claimed invention.” Ex. 2111, ¶ 62. As explained above, the system that is disclosed and claimed in the ‘902 patent includes “local audio devices [that] synchronize their clocks to the master time code reference.” The system modifies “the speed of a local timecode generator as necessary to maintain its synchronization with a master timecode generator.” Ex. 1001 col. 3, ll. 53-55.

In sharp contrast, Strub discloses that “either the content of visual recordings or the content of audio recordings (or both) can be used to establish synchronization between the recording data obtained by different recording units.” Ex. 1003, 80:13-16. Strub also discloses a GPS time signal is used as a clock to

¹³ See Petition, p. 23-26; see also *Heart Failure Techs.*, IPR2013-00183, Paper 12, at 9 (finding Petitioner’s assertion that references concerned the same field did not amount to an “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

produce time stamps: “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.” *Id.* at 63:40-49. Indeed, Strub explicitly discloses that “the recording units may not include clocks for enabling time-stamping of the recordings.” *Id.* at 80:8-10.

Woo differs substantially from both the claimed invention of the ‘902 patent and Strub. Woo discloses a device having a “clock output 128 [that] is conventionally formatted and structured, and is preferably compatible with present-day commercially-available equipment that have master clock input ports.” *Id.* at 8:1-4. Woo clearly states that the time output of a GPS receiver must be combined with a pulse to perform synchronization. That is, the output of the GPS receiver described in Woo is insufficient to perform synchronization, unlike the claimed “master timecode generator” in the ’902 patent. Indeed, it is Mr. DeFilippis’s “opinion that a person of ordinary skill in the art would not have been motivated to combine them, since they use different approaches, and it is not clear that the outcome improves anything.” Ex. 2111, ¶ 63.

The Board routinely denies IPR petitions that are based upon unsupported argument for combining the teachings of different systems from different prior art

references, it declined to institute the IPR.¹⁴ Here, as in *Epistar*, the Petitioner failed to provide experimental data or other objective evidence indicating 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.”¹⁵

Indeed, Woo is non-analogous art to the claimed invention. *In re Bigio*, 381 F.3d 1320, 1325, 72 USPQ2d 1209, 1212 (Fed. Cir. 2004) (a reference that is not analogous art to the claimed invention may not be used in an obviousness rejection). A reference is analogous art to the claimed invention only if it (i) is from the same field of endeavor; or (2) is reasonably pertinent to the problem faced by the inventor. *See Bigio*, 381 F.3d at 1325, 72 USPQ2d at 1212. A reference is not “reasonably pertinent” to the problem unless it “logically [] commended itself to an inventor's attention in considering his problem.” *In re ICON Health and Fitness, Inc.*, 496 F.3d 1374, 1379-80 (Fed. Cir. 2007) (quoting *In re Clay*, 966 F.2d 656, 658, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992)).

¹⁴ *Epistar, et al. v. Trustees Of Boston University*, IPR2013-00298, Decision Not To Institute, Paper No. 18 (P.T.A.B. November 15, 2103).

¹⁵ *OSRAM Sylvania, Inc. v. Am Induction Techs., Inc.*, 701 F.3d 698, 706 (Fed. Cir. 2012).

“Woo is not in the same field as the claimed invention and is not reasonably pertinent to the problem faced by the inventors of the ‘902 patent.” Ex. 2111, ¶ 64. Woo relates to a “GPS receiver [that] comprises a data output port for communicating time code information formatted according to standards.” Ex. 1020, Abstract. The claimed invention makes no mention of any GPS satellite or receiver; it instead relates to using a master timecode generator to control other timecode generators in other recorders. Ex. 1001, col. 26, ll. 1-13. “A POSA, therefore, would not have considered adapting Woo to address the problem identified in the ‘902 patent.” Ex. 2111, ¶ 64.

A POSA would not have been motivated to combine Strub and Woo because Strub already discloses a solution to post-production editing (*i.e.*, participants share their locally recorded audio after a recorded event). Ex. 1003, col. 80, ll. 1-64. “Therefore, applying the Woo solution to Strub would have been unnecessary. A POSA would not have been motivated to change Strub’s simple system with a complex technical solution requiring additional signal processing including a video sync generator especially because doing so would dramatically increase the size, weight and battery requirements of the recorder system, making the Strub backpack unwieldy, cumbersome and impractical for its intended use for ‘low attention recording.’” Ex. 2111, ¶ 65.

For these additional reasons, Petitioner did not show by a preponderance of the evidence that claim 7 would have been obvious.

9. Objective Indicia Of Non-Obviousness Support The Patentability Of The Claims Of The '902 Patent.

The non-obviousness of the claims are also supported by secondary considerations of non-obviousness, including satisfaction of a long felt need by the patented invention, failure of others, and industry praise of the patented invention. As explained by motion picture and television sound technicians of ordinary skill in the art at the time of the invention of the '902 patent who have decades of experience with well-known movies and television shows (*e.g.*, *The Last Samurai*, *Independence Day*, *Almost Famous*), there was a long felt need for a wireless, wearable, transmitting and recording device that could reliably capture sound data from actors recording a movie or television show:

I have been in many situations where for a variety of reasons there have been RF dropouts and in some cases the wireless on the talent has moved way out of range ... when working with moving cars, moving shots or ambitious and unplanned scenes ... prior to Zaxcom's invention, the audio would be lost forever in these situations (Ex. 2104, ¶ 6).

Petitioner's expert Mr. Tinsman agreed that the wireless devices available prior to May, 2005 "had a potential for dropouts." Ex. 2109, p. 113.

The claimed invention of the '902 patent satisfied this long felt need with a wireless, wearable, transmitter/recorder that combines audio data stored locally in the wearable recorder with the same audio data transmitted and stored at a remote recorder:

Mr. Sanders announced his 3rd generation units. I purchased 12 TRX 900 transmitters and these included a mini SD card slot for recording and a built in remote control receiver ... Not only could they transmit audio, they could also receive time code sync signals and remote control commands. Zaxcom combined this incredible capability with a built in digital recorder, making his digital transmitters full synchronous recording systems. This capability solved the major limitation of radio mics ... radio mics had a very limited range. Depending on what else is on the frequency, the range can be as little as 50 feet. In a big motion picture scene, especially on a film that Ridley Scott is directing, there can be simultaneous action hundreds of feet apart. Prior to Zaxcom's invention of recording radios, the field mixer would capture as much of the dialog as his equipment would allow and the rest would have to be dubbed in post production. I can't

emphasize enough the revolution these recording radios brought on.

If the actors in a scene went in and out of radio range the SD card on the transmitter would continue to record the audio ... Zaxcom also integrated all their equipment so a sound mixer could hit a single button on a Zaxcom recorder and all the radios in use would play back from a certain take or time code start point so the scene could be re-mixed without any radio drop outs. Zaxcom has been doing this since 2005. 14 years! (Ex. 2103, ¶ 6);

Each Zaxcom transmitter can digitally record the output of the microphone along with transmitting the signal to the receiver. If there is a drop out of the RF signal, the identical recording in the transmitter can be used by post production. (Ex. 2104, ¶ 6).

Others failed to achieve what Glenn Sanders accomplished with the patented invention of the '902 patent:

To give you an idea of how revolutionary Mr. Sanders's gear was, I first put the digital radios to use on Brown Sugar in November 2001 when everyone was saying digital radio microphones ("mics") were impossible. Zaxcom would have no competition for almost 8 years. It was 2009 before SONY engineers were able to figure out the algorithms pioneered by Zaxcom. By the time Sony came out with

their first digital radio Zaxcom was already on their 3rd generation

(Ex. 2103, ¶ 5);

NO ONE ELSE has remote control capability of more than a few feet,
if at all. NO ONE else has recording capability, NO ONE else has
systems integration. NO ONE else has reduced bandwidth digital
radios, and NO ONE else has micro sized digital radios period (Ex.
2103, ¶ 7); and

using the digital recording wireless transmitter ... I could always
deliver a track to post production even ... where there were failures of
the RF transmission. Zaxcom was the first and only company to
provide this; nothing else even came close (Ex. 2104, ¶ 7).

Zaxcom received praise and recognition from persons of ordinary skill
within the motion picture and television industry for the patented invention
of the '902 patent:

I can't emphasize enough the revolution these recording radios
brought on. If the actors in a scene went in and out of radio range the
SD card on the transmitter would continue to record the audio. The
built in receiver and time code generator within the transmitter would
encode the audio so it could be easily re-mixed, even in the field,
sometimes even after each take (Ex. 2104, ¶ 6); and

With Zaxcom's brilliant invention ... I could always deliver a track to post production even ... where there were failures of the RF transmission ... I would never want to be without this function because it has allowed me to deliver audio to post in a manner which no other product provided (Ex. 2104, ¶ 7).

Indeed, Glenn Sanders and the co-inventor of the '902 patent, Howard Stark, received the Technical Achievement Award from the Academy of Motion Picture Arts and Sciences for the digital recording wireless products that embody the claimed invention of the '902 patent. Exs. 2101, 2102, 2087, ¶¶ 2-4. Mr. Sanders also received the Emmy award from the Academy of Television Arts and Sciences for the Zaxcom, Inc. digital recording wireless products that embody the claimed invention of the '902 patent. Exs. 2098, 2099, 2100, 2087, ¶¶ 2-4.

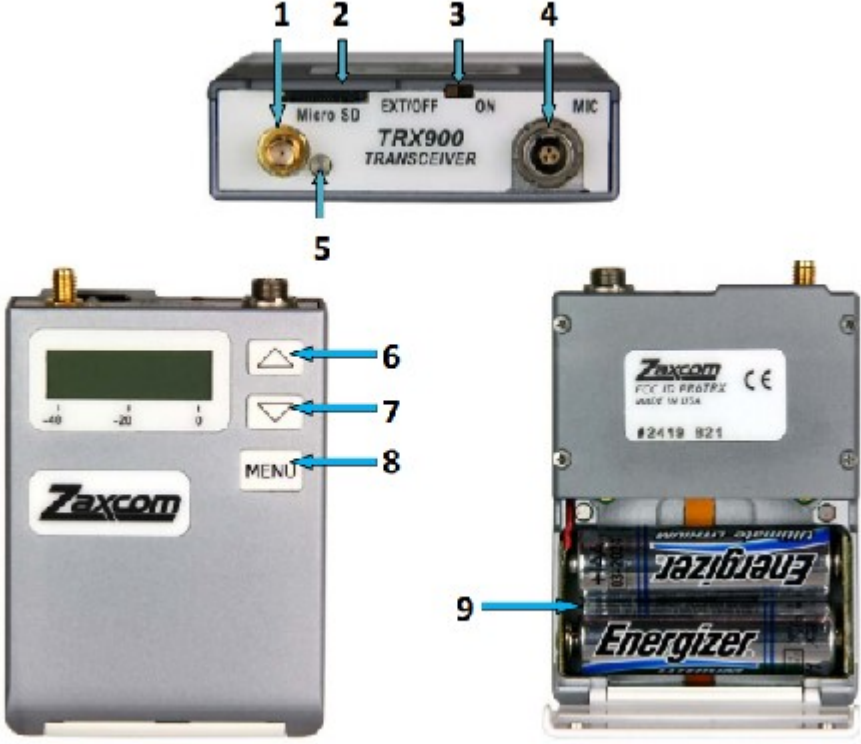
As explained by Mr. DeFilippis, “[t]here is a strong nexus between the objective indicia of non-obviousness and the issued and substitute claims of the ‘902 patent. The Zaxcom technology that satisfied a long felt need and received industry praise and recognition include the features that are recited in the issued and substitute claims of the ‘902 patent.” Ex. 2111, ¶ 92. Indeed, the Zaxcom technology was repeatedly praised for the claimed features. Ex. 2106 (“[d]igital recording of microphone signal in the wireless transmitter to provide backup recording of the original microphone signal”; “[r]ecord audio file protection in case

of power failure or media removal”; “[d]istribution to each digital wireless body pack of a common time code signal”; and “[w]ireless digital remote control of the wireless microphone transmitter including pre-amp gains.” Zaxcom’s “innovative products” have been praised as “the first digital wireless transmission system for microphones and a production tool that married wireless transmission with a recording device located within the actor’s body pack.” (Exhibit 2107)

As explained by Mr. DeFilippis, “[t]he products for which the inventors of the ‘902 patent received the Emmy award, the Technical Achievement Award from the Academy of Motion Picture Arts and Sciences, and other industry praise include the TRX900AA manual (Ex. 2113) and TRX900LA & TRX900LAS ... these products contain all of the limitations recited in the originally-issued challenged claims as well as the substitute claims.” Ex. 2111, ¶ 93.

Claim Limitation	TRX900AA manual (Ex. 2113) and TRX900LA & TRX900LAS manual (Ex. 2114)
7. A system for recording locally generated audio comprising:	“Frequency – This is the UHF transmit frequency of the TRX-900AA. If the transmitter is being used in RECORD ONLY mode “NOTX” will be displayed. ZaxNet Status • RX – The transmitter is set to receive ZaxNet timecode and commands. • TX – The transmitter is sending ZaxNet timecode and audio. • JAM - The transmitter has jammed timecode.” Ex. 2113, p. 5; “Frequency – This is the transmit frequency of the TRX-900LA/LAS. If the transmitter is being used in RECORD ONLY mode “NOTX” will be displayed. ZaxNet Status • RX – The transmitter is set to receive ZaxNet timecode and commands. • TX – The transmitter is sending ZaxNet timecode and audio.” Ex. 2114, p. 5.

at least one master timecode generator for generating a plurality of master timecodes; and	“ZaxNet Status • RX – The transmitter is set to receive ZaxNet timecode and commands. • TX – The transmitter is sending ZaxNet timecode and audio. • JAM - The transmitter has jammed timecode.” Ex. 2113, p. 5; “ZaxNet Status • RX – The transmitter is set to receive ZaxNet timecode and commands. • TX – The transmitter is sending ZaxNet timecode and audio.” Ex. 2114, p. 5.
at least one local audio device wearable by a creator of said locally generated audio including:	The TRX900LAS is a stereo version of the TRX900LA transmitter. The LAS stereo transmitter can take two lavalier microphones via the single 3-pin LFMCI connector and transmit both sources over one frequency. The LAS stereo transmitter can also be set to operate in mono mode- while the LA transmitter cannot.  Ex. 2114, p. 3.

	 Ex. 2113, p. 3.
at least one local audio device receiver for receiving at least one of the group consisting of digital commands and said master timecodes;	“ZaxNet Status • RX – The transmitter is set to receive ZaxNet timecode and commands. • TX – The transmitter is sending ZaxNet timecode and audio. • JAM - The transmitter has jammed timecode.” Ex. 2113, p. 5; “ZaxNet Status • RX – The transmitter is set to receive ZaxNet timecode and commands. • TX – The transmitter is sending ZaxNet timecode and audio.” Ex. 2114, p. 5.
at least one audio input port for receiving locally generated audio from	“1. SSMA Antenna Connector 2. Media Slot Media Slot To insert a micro SD card, with the screen facing you, turn the card so the finger contacts are facing to you and down toward the slot. Insert it into the slot and press it down until you here a slight click. To remove it, press the card in until you hear the same click again.

an audio input device;	3. Power Switch The switch position to the left is OFF and to the right is ON. But if using external power via an STA adaptor the left position “EXT” is ON. 4. Microphone / Input connector. 5. Dual color Status LED • Green - Unit is on. • Red - Unit inexpediently stopped recording. • Green / Red flickering - Unit is recording” Ex. 2113, p. 3. “1. Power Switch 2. SSMA Antenna Connection 3. Media Slot Media Slot To insert a micro SD card, with the screen facing you, turn the card so the finger contacts are facing you and down toward the slot. Insert it into the slot and press it down until you here a slight click. To remove it, press the card in until you hear the same click again. 4. Microphone / Input connector.” Ex. 2114, p. 4.
at least one memory;	“To Format a Card: 1. Before formatting the card, you may want to name the transmitter. Naming the card makes it easier to differentiate files from different recorders - for example you can name the card with the talents name. The NAME menu is located at the end of the Extended Menu (page 19 of this manual). 2. With the power ‘OFF’, insert the memory card into the media slot with the label to the back of the unit. Press it all the way in till it “clicks”. 3. Power up the transmitter while holding the Menu key to enter the Extended Menu. 4. Advance to this menu. 5. Press the INC key 5 times. 6. You will see “FORMATTING FAT 32” 7. The TRX will displays “SUCCESS” or “FORMAT FAILED ERROR” 8. If “SUCCESS” appears power cycle the TRX and make sure the unit will record.” Ex. 2113, p. 12; Ex. 2114, p. 13.

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

Zaxcom TRX-900AA Manual **Extended Men**

Time Code Jam Mode

**TC JAM MODE:
AUTO-JAM NORMAL**

If you are using record run timecode this menu controls whether the TRX-900AA will go into record when it receives running timecode.

- **AUTO-JAM NORMAL** – The TRX will continuously jam timecode via ZaxNet.
- **AUTO-LOAD REC RUN** – The TRX will continuously jam timecode via ZaxNet and will start and stop the recording if the unit is receiving record run timecode. In this mode the transmitter will go into record mode when it detects rolling timecode. And the will stop when the timecode stops. If timecode is lost because the IFB signal is too weak the unit will not stop but will continue in whatever state it was in until the timecode signal is restored.

Time Code Source

**TC SOURCE:
IFB (RF)**

This menu selects how the TRX-900AA will receive its timecode.

- **IFB (RF)** – The transmitter will receive timecode via ZaxNet being broadcast from Nomad, an IFB100/200, another TRX transmitter or a ZFR recorder.
- **AUDIO INPUT** – The transmitter, with a proper cable, will receive timecode via the microphone input.
- **SIDE CONNECTOR** – The transmitter will receive its timecode from the timecode in connector from the STA adaptor or TCA-100.

When timecode is connected, it takes the transmitter approximately three seconds to recognize the TC.

Ex. 2113, p. 14.

Time Code Jam Mode

**TC JAM MODE
AUTO-JAM NORMAL**

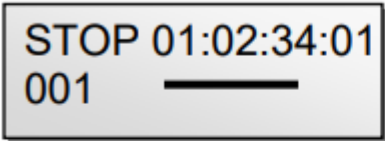
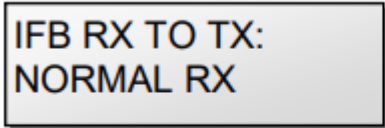
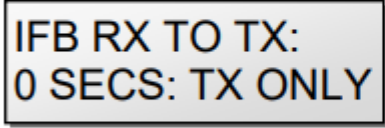
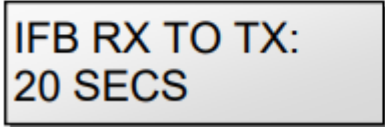
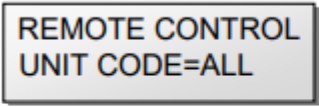
If you are using record run timecode this menu controls whether the TRX900-LA/LAS will go into record when it receives running timecode.

- **AUTO-JAM NORMAL** – The TRX will continuously jam timecode via ZaxNet.
- **AUTO-LOAD REC RUN** – The TRX will continuously jam timecode via ZaxNet and will start and stop the recording if the unit is receiving record run timecode. In this mode the transmitter will go into record mode when it detects rolling timecode. And the will stop when the timecode stops. If timecode is lost because the IFB signal is too weak the unit will not stop but will continue in whatever state it was in until the timecode signal is restored.

Ex. 2114, p. 13

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;	Transport Control This page displays the transport status of the transmitter. The top line displays the current mode: REC, PLAY or STOP followed by the timecode. The bottom line contains the segment number and the audio level. Playing back from the transport screen • Pressing the INC key while stopped will play the segment that is displayed. • Pressing the INC key while in play mode will fast forward. • Pressing the DEC key while playing back will stop the playback. • Holding the DEC key while playing back will take you to the start of that segment. • Pressing the DEC key while stopped will rewind. Ex. 2113, p. 6; Ex. 2114, p. 6. IFB Receive to Transmit time ← The TRX will receive ZaxNet only and NOT transmit ZaxNet TC and audio. ← The TRX will transmit ZaxNet TC and audio only and will NOT receive wireless TC. ← Adjustable from 1 up to 20 Seconds. After boot up the TRX will search for a ZaxNet signal for XX seconds before it begins to transmit ZaxNet TC and Audio Ex. 2113, p. 11; Ex. 2114, p. 11.
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	Transport Control  This page displays the transport status of the transmitter. The top line displays the current mode: REC, PLAY or STOP followed by the timecode. The bottom line contains the segment number and the audio level. Playing back from the transport screen • Pressing the INC key while stopped will play the segment that is displayed. • Pressing the INC key while in play mode will fast forward. • Pressing the DEC key while playing back will stop the playback. • Holding the DEC key while playing back will take you to the start of that segment. • Pressing the DEC key while stopped will rewind. Ex. 2113, p. 6; Ex. 2114, p. 6. IFB Receive to Transmit time  ← The TRX will receive ZaxNet only and NOT transmit ZaxNet TC and audio.  ← The TRX will transmit ZaxNet TC and audio only and will NOT receive wireless TC.  ← Adjustable from 1 up to 20 Seconds. After boot up the TRX will search for a ZaxNet signal for XX seconds before it begins to transmit ZaxNet TC and Audio Ex. 2113, p. 11; Ex. 2114, p. 11.
wherein said stamped local audio data includes at least one identifier selected from the group consisting of	Unit ID  This assigns a unique number identify the TRX-900 within a particular group. This allows individual devices in one group to be independently controlled. You can assign a number from 1 to 200 Ex. 2113, p. 15; Ex. 2114, p. 14.

track identifiers, local audio device identifiers, performer identifiers, and combinations thereof.	Name NAME: SN1234 ↑ This menu changes the name of the transmitter. The name entered into the unit becomes part of the name of the audio files generated by the unit and is also included in the metadata of the BWF file. Naming the unit aids in identifying the files from several different wireless. The maximum Name length is 8 characters. You can select any letter or number and can even use spaces. To set/change the name: 1. Press the INC or DEC key to change the character in the current position. 2. Press the MENU key to proceed to the next character. 3. When finished, press and hold the MENU key set the name and leave this page or you can cycle the power. Ex. 2113, p. 21; Ex. 2114, p. 19.
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Ex. 2111, ¶ 93.

Clearly, the evidence of secondary considerations indicates that the claimed invention of the '902 patent would not have been obvious to a person of ordinary skill in the art.

VIII. Conclusion

For all the reasons expressed herein, the Petitioner did not show by a preponderance of the evidence that any claim of the '902 patent is unpatentable.

Date: April 24, 2019

Respectfully Submitted,

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CERTIFICATE OF COMPLIANCE

This Paper contains 13,975 words, excluding the portions exempted by 37 C.F.R. ¶42.24(a)(1). Accordingly, this Paper complies with the requirements of 37 C.F.R. § 42.24(b)(1).

Dated: April 24, 2019

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CERTIFICATE OF SERVICE

Under 37 C.F.R. §§ 42.6(e), this is to certify that I caused an electronic copy of the foregoing PATENT OWNER'S RESPONSE and its exhibits to be served on the Petitioner's lead and backup counsel listed below by filing in the Patent Review Processing System and by email to the following email addresses:

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