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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/019,247	09/11/2023	7594249	189005.TR004	2398
153979	7590	05/31/2024		
Arch & Lake LLP 203 North LaSalle Street, Suite 2100 Chicago, IL 60601			EXAMINER CAMPBELL, JOSHUA D	
			ART UNIT	PAPER NUMBER
			3992	
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			05/31/2024	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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HAYNES AND BOONE, LLP IP SECTION
2323 VICTORY AVENUE
SUITE 700
DALLAS, TX 75219

***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/019,247 .

PATENT UNDER REEXAMINATION 7594249 .

ART UNIT 3992 .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Notice of Intent to Issue Ex Parte Reexamination Certificate	Control No. 90/019,247	Patent Under Reexamination 7594249	
	Examiner JOSHUA D CAMPBELL	Art Unit 3992	AIA Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☒ Prosecution on the merits is (or remains) closed in this *ex parte* reexamination proceeding. This proceeding is subject to reopening at the initiative of the Office or upon petition. *Cf.* 37 CFR 1.313(a). A Certificate will be issued in view of
 - (a) ☒ Patent owner's communication(s) filed: 22 April 2024.
 - (b) ☐ Patent owner's failure to file an appropriate timely response to the Office action mailed: ____.
 - (c) ☐ Patent owner's failure to timely file an Appeal Brief (37 CFR 41.31).
 - (d) ☐ The decision on appeal by the ☐ Board of Patent Appeals and Interferences ☐ Court dated ____
 - (e) ☐ Other: ____.
2. The Reexamination Certificate will indicate the following:
 - (a) Change in the Specification: ☐ Yes ☒ No
 - (b) Change in the Drawing(s): ☐ Yes ☒ No
 - (c) Status of the Claim(s):
 - (1) Patent claim(s) confirmed: 10.
 - (2) Patent claim(s) amended (including dependent on amended claim(s)): ____
 - (3) Patent claim(s) canceled: ____.
 - (4) Newly presented claim(s) patentable: ____.
 - (5) Newly presented canceled claims: ____.
 - (6) Patent claim(s) ☐ previously ☐ currently disclaimed: ____.
 - (7) Patent claim(s) not subject to reexamination: 1-9 and 11-17.
3. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
4. ☒ Note the attached statement of reasons for patentability and/or confirmation. Any comments considered necessary by patent owner regarding reasons for patentability and/or confirmation must be submitted promptly to avoid processing delays. Such submission(s) should be labeled: "Comments On Statement of Reasons for Patentability and/or Confirmation."
5. ☐ Note attached NOTICE OF REFERENCES CITED (PTO-892).
6. ☐ Note attached LIST OF REFERENCES CITED (PTO/SB/08 or PTO/SB/08 substitute).
7. ☐ The drawing correction request filed on ____ is: ☐ approved ☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have
 - ☐ been received.
 - ☐ not been received.
 - ☐ been filed in Application No. ____.
 - ☐ been filed in reexamination Control No. ____.
 - ☐ been received by the International Bureau in PCT Application No. ____.

* Certified copies not received: ____.
9. ☐ Note attached Examiner's Amendment.
10. ☐ Note attached Interview Summary (PTO-474).
11. ☐ Other: ____.

All correspondence relating to this reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

/JOSHUA D CAMPBELL/ Primary Examiner, Art Unit 3992	
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cc: Requester (if third party requester)

DETAILED ACTION

1) This Office action addresses claim 10 of United States Patent Number 7,594,249 (hereinafter “the ‘249 Patent”) for which it has been determined in the Order Granting *Ex Parte* Reexamination mailed October 26, 2023, regarding Reexamination Control No. 90/019,247 (hereinafter the “Order”) that a substantial new question of patentability was raised in the Request for *Ex Parte* reexamination filed on September 11, 2023 (hereinafter the “Request”).

1) This reexamination prosecution is now terminated, and this action is a Notice of Intent to Issue *Ex Parte* Reexamination Certificate (NIRC).

2) The ‘249 Patent has expired.

3) The rejection of claim 10 under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Afshary (U.S. Patent Application Publication No. 2006/0218593) in view of Mills (U.S. Patent No. 6,795,450) has been withdrawn as discussed below.

4) The rejection of claim 10 under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Amit (U.S. Patent No. 7,127,734) in view of Mills (U.S. Patent No. 6,795,450) has been withdrawn as discussed below.

Status of Claims

5) Patent Claim 10 is confirmed.

Priority and Patent Term

6) The '249 patent matured from the 09/910,412 application, which relied on Provisional application No. 60/288,967. The application for the '249 patent was filed July 21, 2001, with an effective filing date of May 4, 2001.

7) MPEP 2701 states the following:

For applications filed on or after June 8, 1995, Section 532(a)(1) of the Uruguay Round Agreements Act (Public Law 103-465, 108 Stat. 4809 (1994)) amended 35 U.S.C. 154 to provide that the term of a patent (other than a design patent) begins on the date the patent issues and ends on the date that is twenty years from the date on which the application for the patent was filed in the United States or, if the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121, or 365(c), twenty years from the filing date of the earliest of such application(s).

Based on the citation above, the '249 patent is expired. The term of twenty years from the filing date of the '249 patent plus the patent term adjustment of 816 days has passed.

8) 37 C.F.R. 1.530(j) states, "No enlargement of claim scope. No amendment may enlarge the scope of the claims of the patent or introduce new matter. ***No amendment may be proposed for entry in an expired patent. Moreover, no amendment, other than the cancellation of claims, will be incorporated into the patent by a certificate issued after the expiration of the patent.***" (emphasis added). Thus, because the patent is expired no amendments of the claims will be allowed aside from the cancellation of claims.

Additionally, in making the determination of whether to order reexamination, the Office will determine the proper meaning of the patent claims by giving the claims their broadest reasonable interpretation consistent with the specification (see *In re Yamamoto*, 740 F.2d 1569 (Fed. Cir. 1984)), except in the case of an expired patent (in a reexamination involving claims of an expired patent, claim construction is pursuant to the principle set forth by the court in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) (words of a claim "are generally given their ordinary and

customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention, see *Ex parte Papst-Motoren*, 1 USPQ2d 1655 (Bd. Pat. App. & Inter. 1986)).

Response to Arguments

9) Patent Owner's Remarks (see: PO's Response, pages 9-25) have been fully considered in view of the Request and the rejections set forth in the previous office action.

PO's Response successfully overcomes the obviousness rejections of claim 10 (*Afshary* in view of *Mills* and *Amit* in view of *Mills*). The examiner agrees that under the Phillips construction, the ordinary and customary meaning as understood by a person of ordinary skill in the art at the time of the invention of the requirements of "a plurality of terminal devices connected to the wiring branches, each terminal device capable of communicating with other terminal devices the reflected signal path created by the filter, wherein the terminal devices perform equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals." (claim 10) would require performing equalization specifically to overcome communication channel impairments caused by the reflected signals, described as inter-symbol interference (ISI). The specification provides further discussion of both the communication channel impairments caused by the reflected signals and this concept as follows:

The present invention operates by introducing a reflection in the LAN electrical wiring. A reflection anywhere in the wiring produces a multipath signal in some or all wiring branches that creates inter-symbol interference (ISI). The multipath signal has a delay and amplitude difference relative to the main signal. In the frequency domain, a reflection produces ripples in the response of the channel, creating amplitude variations across the pass band. In the time domain, ISI is seen as an impairment to the shape of the digital signal pulses. ISI will degrade the bit error rate (BER) performance of the communication channel. The effects of ISI can be overcome by applying modulation techniques or receiver processing techniques. An adaptive equalizer in the

terminal device receiver creates a filter response that restores a flat frequency response impaired by the multipath signal. The adaptive filter can also be seen as a coherent summer of a main signal and reflected signals. (column 5, line 64-column 6, line 13 of the '249 patent)

The teachings of Afshary and Amit provide no discussion of equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals as claimed. While the Mills reference does disclose equalization of signals, it does not provide any discussion of reflected signals, communication channel impairments caused by using reflected signals, or performing equalization specifically to overcome communication channel impairments caused by the reflected signals, described as inter-symbol interference (ISI) that would motivate one of ordinary skill in the art to combine the teachings of Mills with that of Afshary or Amit to arrive at the claimed invention as properly interpreted under the Phillips standard.

Statement of Reasons for Patentability and/or Confirmation

10) The following is an examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

11) Claim 10 is confirmed over the prior art that was explained in the request and determined to raise a substantial new question of patentability in the order granting reexamination because the art of record does not teach:

a plurality of terminal devices connected to the wiring branches, each terminal device capable of communicating with other terminal devices the reflected signal path created by the filter, wherein the terminal devices perform equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals. (as found in claim 10)

In a reexamination proceeding involving claims of an expired patent, claim construction pursuant to the principle set forth by the court in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) (words of a claim "are generally given their ordinary and customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention) should be applied since the expired claim are not subject to amendment. See *Ex parte Papst-Motoren*, 1 USPQ2d 1655 (Bd. Pat. App. & Inter. 1986). Under the Phillips construction, the ordinary and customary meaning as understood by a person of ordinary skill in the art at the time of the invention of the requirements of "a plurality of terminal devices connected to the wiring branches, each terminal device capable of communicating with other terminal devices the reflected signal path created by the filter, wherein the terminal devices perform equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals." (claim 10) would require performing equalization specifically to overcome communication channel impairments caused by the reflected signals, described as inter-symbol interference (ISI). The teachings of Afshary and Amit provide no discussion of equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals as claimed. While the Mills reference does disclose equalization of signals, it does not provide any discussion of reflected signals, communication channel impairments caused by using reflected signals, or performing equalization specifically to overcome communication channel impairments caused by the reflected signals, described as inter-symbol interference (ISI) that would motivate one of ordinary skill in the art to combine the teachings of Mills with that of Afshary or Amit to arrive at the claimed invention as properly interpreted under the Phillips standard

Therefore, none of the references considered in this reexamination proceeding properly disclose at least the discussed limitations of the claimed invention, either alone or in combination.

12) Any comments considered necessary by PATENT OWNER regarding the above statement must be submitted promptly to avoid processing delays. Such submission by the patent owner should be

labeled: "Comments on Statement of Reasons for Patentability and/or Confirmation" and will be placed in the reexamination file.

Conclusion

All correspondence relating to this ex parte reexamination proceeding should be directed:

Electronically: Registered users may submit via Patent Center at <https://patentcenter.uspto.gov/>.

By Mail to: Mail Stop *Ex Parte* Reexam
 Central Reexamination Unit
 Commissioner for Patents
 United States Patent & Trademark Office
 P.O. Box 1450
 Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
 Central Reexamination Unit

By hand: Customer Service Window
 Randolph Building
 401 Dulany Street
 Alexandria, VA 22314

For electronic transmissions, 37 CFR 1.8(a)(1)(i)(C) and (ii) states that correspondence (except for a request for reexamination and a corrected or replacement request for reexamination) will be considered timely filed if (a) it is transmitted via the USPTO patent electronic filing system in accordance with 37 CFR 1.6(a)(4), and (b) includes a certificate of transmission for each piece of correspondence stating the date of transmission, which is prior to the expiration of the set period of time in the Office action.

Any inquiry concerning this communication should be directed to Joshua D. Campbell at telephone number (571)272-4133.

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Art Unit: 3992

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/JOSHUA D CAMPBELL/
Primary Examiner, Art Unit 3992

Conferees:

/ADAM L BASEHOAR/
Primary Examiner, Art Unit 3992

/ALEXANDER J KOSOWSKI/
Supervisory Patent Examiner, Art Unit 3992