



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 11/835,647 | 08/08/2007 | Ian Craddock | 041618-92 | 1800 |
| 22204 | 7590 | 10/27/2016 | EXAMINER | |
| NIXON PEABODY, LLP 799 Ninth Street, NW SUITE 500 WASHINGTON, DC 20001 | | | EVOY, NICHOLAS LANE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3768 | |
| | | | NOTIFICATION DATE | DELIVERY MODE |
| | | | 10/27/2016 | ELECTRONIC |

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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

nppatent@nixonpeabody.com
ipairlink@nixonpeabody.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte IAN CRADDOCK, ALAN WILLIAM PREECE,
RAJAGOPAL NILAVALAN, JACK ALBERT LEENDERTZ,
RALPH BENJAMIN, and FREDERICK JOHN WILSON

Appeal 2014-006781
Application 11/835,647¹
Technology Center 3700

Before MICHAEL C. ASTORINO, BRADLEY B. BAYAT, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 10–12, 21–23, 43, and 44. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ “The real party of interest, by assignment from The University of Bristol of the United Kingdom to Micrima Limited of the United Kingdom, is Micrima Limited, a corporation of the United Kingdom.” Appeal Br. 1.

ILLUSTRATIVE CLAIM

10. A multi-static apparatus for measuring the internal structure of an object, the apparatus including:

a) a single transmitter configured to transmit wave energy onto the object,

b) a plurality of corresponding receivers configured to detect the effect of the object on the passage of the wave energy and generate a plurality of output signals; and

c) a processor which is:

i) configured to focus the output signals to generate data associated with a desired point in the object;

ii) configured to select one or more additional points in the object, each additional point having an equivalent position, in relation to the transmitter and receivers to the desired point;

iii) configured to focus the output signals to generate additional data associated with each additional point; and

iv) configured to reduce signal artifacts by

(1) generating calibration data from the additional data, and

(2) subtracting the calibration data from the data associated with the desired point.

CITED REFERENCES

The Examiner relies upon the following references:

Nelson et al. US 5,999,836 Dec. 7, 1999
(hereinafter "Nelson")

Van Veen et al. US 2003/0088180 A1 May 8, 2003
(hereinafter "Van Veen")

Meaney et al. US 2004/0077943 A1 Apr. 22, 2004
(hereinafter “Meaney”)

Fang US 6,801,165 B2 Oct. 5, 2004

REJECTIONS

I. Claims 10, 21, 43, and 44 are rejected under 35 U.S.C. § 103(a) as unpatentable over Meaney and Van Veen.

II. Claims 11 and 22 are rejected under 35 U.S.C. § 103(a) as unpatentable over Meaney, Van Veen, and Nelson.

III. Claims 12 and 23 are rejected under 35 U.S.C. § 103(a) as unpatentable over Meaney, Van Veen, and Fang.

FINDINGS OF FACT

The findings of fact relied upon, which are supported by a preponderance of the evidence, appear in the following Analysis.

ANALYSIS

The Appellants contend that that the Examiner erred in rejecting independent claim 10 because the claim language “[a] multi-static apparatus for measuring the internal structure of an object . . . including” “a single transmitter” and “a plurality of corresponding receivers” requires that the claimed apparatus have *only one* “transmitter” and “a plurality of corresponding receivers,” whereas, by contrast, the cited Meaney reference discloses only devices in which *each* “transmitter” is paired with *exactly one* “receiver.” Appeal Br. 4–8.

According to the Examiner, claim 10 is not limited to devices having only one “transmitter,” but merely requires *at least one* “transmitter,” on account of how a person of ordinary skill in the art would understand the term “multi-static,” as well as claim 10’s use of the non-restrictive term

“including” in the preamble, as opposed the restrictive expression “consisting of.” Answer 8–9, 12–13. Moreover, according to the Examiner, Meaney discloses an embodiment in which exactly one “transmitter” is employed with a “plurality of corresponding receivers,” which the Examiner finds to be disclosed in Meaney’s Figure 1 that has “transmitter 16” and “receivers 22 and 26.” Answer 13–14.

As an initial matter, the use of the word “single” in the phrase “a single transmitter,” in claim 10, limits the scope of the limitation to exactly one “transmitter.” *See Free Motion Fitness, Inc. v. Cybex Int’l, Inc.*, 423 F.3d 1343, 1351 (Fed. Cir. 2005) (claimed “single cable” limited to only one cable). The use of the transitional word “comprising” in claim 10’s preamble does not alter the meaning of the limitation reciting “a single transmitter.” *See In re Varma*, 816 F.3d 1352, 1362 (Fed. Cir. 2016) (“Although the transitional term ‘comprising’ indicates that the claim is open-ended, the term does not render each limitation or phrase within the claim open-ended.”)

Nevertheless, the Examiner correctly finds (Answer 13–14) that Meaney discloses the claimed “a single transmitter” and “a plurality of corresponding receivers,” because Meaney’s Figure 1 embodiment discloses one “transmitter” (“Transmitter 16”) and two “receivers” (“Receiver 22” and “Receiver 26”).

As a critique of the Examiner’s findings concerning Meaney’s Figure 1 embodiment, the Appellants argue that the claim terms “transmitter” and “receivers” refer specifically to respective associated *antennas*. Appeal Br. 6–7. Thus, the Appellants contend that Meaney’s “transmitter 16” is merely the equipment for generating a radiofrequency signal that may be enclosed

in a “single box,” but Meaney “is completely silent regarding the actual transmitting antennas or the transmitters themselves, and similarly is silent regarding the receiving antennas or receivers themselves.” *Id.* at 6.

Similarly, the Appellants assert that “all of the embodiments described in Meaney indicate that there is a receiving antenna for each transmitting antenna, not multiple corresponding receiving antennas for a single transmitting antenna, as required by claim 10.” *Id.* at 7.

However, claim 10 recites “a single transmitter” and “a plurality of receivers,” but does not recite any *antennas*. *See* Answer 12, 18–19. The Appellants’ argument is cast in terms of particular operational aspects of embodiments disclosed in the Specification, but the distinction the Appellants draw is not reflected in the language of claim 10.

Further, the implementation of antennas that the Appellants contend to be absent from Meaney is illustrated in Meaney’s Figure 4 embodiment, which shows one antenna transmitting signals and a plurality of antennas receiving such signals. *See* Final Action 8 (citing Meaney ¶¶ 46–49, 52, 57). For example, “[t]ransmitting antenna 116 . . . transmits the microwave signal” and “[r]eceiving antennas 118 then detect the microwave signals.” Meaney ¶ 52.

Accordingly, the Appellants’ arguments regarding the rejection of claim 10 are not persuasive of error.

As to independent claim 21, the Appellants rely upon the arguments presented for claim 10. Appeal Br. 9.

The Appellants also rely upon the same arguments with regard to dependent claims 11, 12, 22, 23, 43, and 44. *Id.* at 9–10. Although the Appellants’ arguments are deemed unpersuasive of error in the rejection of

Appeal 2014-006781
Application 11/835,647

claim 10, as discussed above, the Appellants' arguments would not apply to dependent claims 43 and 44, which recite the apparatus of the corresponding independent claim, "further including a *plurality of transmitters* configured to transmit wave energy onto the object." Appeal Br. 12, Claims App. (emphasis added).

Accordingly, the rejections of claims 10–12, 21–23, 43, and 44 under 35 U.S.C. § 103(a) are sustained.

DECISION

We AFFIRM the Examiner's decision rejecting claims 10–12, 21–23, 43, and 44 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED