



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.
-----------------	-------------	----------------------	---------------------	------------------

13/590,423

08/21/2012

Aleksandar Modrag Tasic

121973

9482

23696 7590 04/18/2014

QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER

TRAN, KHANH C

ART UNIT

PAPER NUMBER

2631

NOTIFICATION DATE

DELIVERY MODE

04/18/2014

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):

us-docketing@qualcomm.com

Office Action Summary	Application No. 13/590,423	Applicant(s) TASIC ET AL.	
	Examiner KHANH C. TRAN	Art Unit 2631	AIA (First Inventor to File) Status No

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/6/2014.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1-20 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1,11,12,17 and 19 is/are rejected.
- 8) ☒ Claim(s) 2-10,13-16,18 and 20 is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 8/21/2012 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 3) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____. | 4) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

2. The Amendment filed on 2/6/2014 has been entered. Claims 1-20 are still pending in this Office action.

Response to Arguments

3. Applicant's arguments, see Applicants' Remarks, filed 2/6/2014, with respect to the rejection(s) of claim(s) 1, 7, 17 and 19 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hirose U.S. Patent 7,317,894 B2.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 11-12 and 17 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Hirose U.S. Patent 7,317,894 B2.

Art Unit: 2631

Regarding claim 1, Hirose discloses an apparatus (FIG. 6 digital broadcast receiver) comprising:

a first amplifier stage configured to receive and amplify an input radio frequency (RF) signal and provide a first output RF signal to a first load circuit when the first amplifier stage is enabled (variable gain amplifier 15, corresponding to the claimed first amplifier stage, receiving input RF signal (e.g. satellite wave signal and ground wave signal) and providing an output to intermediate frequency demodulation stage (for ground wave), which corresponds to the claimed first load circuit (see column 5 lines 1-30 and FIG. 6) ;

the input RF signal comprising transmissions sent on multiple carriers at different frequencies to a wireless device, the first output RF signal including at least a first carrier of the multiple carriers (as recited above, the input RF signal comprising satellite wave signal and ground wave signal (column 5 lines 1-4) and the output to intermediate frequency demodulation stage for ground wave, corresponding to the claimed first carrier of the multiple carriers);

and a second amplifier stage configured to receive and amplify the input RF signal and provide a second output RF signal to a second load circuit when the second amplifier stage is enabled (variable gain amplifier 25, corresponding to the claimed second amplifier stage, receiving input RF signal (e.g. satellite wave signal and ground wave signal) and providing an output to intermediate frequency demodulation stage (for satellite wave), which corresponds to the claimed second load circuit (see column 5 lines 1-30 and FIG. 6), the second output RF signal including at least a second carrier of

Art Unit: 2631

the multiple carriers different than the first carrier (as recited above, the input RF signal comprising satellite wave signal and ground wave signal (column 5 lines 1-4) and the output to intermediate frequency demodulation stage for satellite wave, corresponding to the claimed second carrier of the multiple carriers).

Note: the rejection is based on the assumption that both first and second amplifier stages are enabled.

Regarding claim 11, Hirose further discloses an input matching circuit coupled to the first and second amplifier stages and configured to receive a receiver input signal and provide the input RF signal (FIG. 6 discloses a combination of a voltage control type variable gain amplifier 33, a wave detection 35 and a control circuit 36 (see column 5 lines 5-20). The combination constitutes the input matching circuit as claimed).

Regarding claim 12, Hirose further discloses the input matching circuit being tunable and comprising at least one adjustable circuit component (the combination of a voltage control type variable gain amplifier 33, a wave detection 35 and a control circuit 36 is tunable and the voltage control type variable gain amplifier 33 is adjustable).

Regarding claim 17, claim is rejected on the same ground as for claim 1 because of similar scope.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 19 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Hirose U.S. Patent 7,317,894 B2.

Regarding claim 19, claim is rejected on the same ground as for claim 1 because of similar scope. However, Hirose does not disclose the first mean for amplifying and the second mean for amplifying as set forth in the application claim. As recited in claim 1 rejection, because variable gain amplifier 15 and variable gain amplifier 25 as disclosed in FIG. 6 perform similar amplification of the first input RF signal, therefore,

Art Unit: 2631

one of ordinary skill in the art at the time the invention was made would have recognized the interchangeability of the variable gain amplifier 15 and variable gain amplifier 25 for the claimed first means for amplifying and the claimed second means for amplifying.

Allowable Subject Matter

6. Claims 2-10, 13-16, 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2631

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Maruta et al. U.S. Patent Application Publication No. US 2007/0177656 A1.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

***/KHANH C TRAN/
Primary Examiner, Art Unit 2631***