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| 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 12/26/2014

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| EXAMINER |
|---|
| TRAN, KHANH C |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2631 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 12/26/2014 | 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 *10/30/2014*.

☐ 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) *1,11,12,14,17 and 19* is/are rejected.

8)☒ Claim(s) *2-10,13,15,16,18 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 _____ 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) ☐ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

## DETAILED ACTION

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

2. The Amendment filed on 10/30/2014 has been entered. Claims 1-20 are still pending in this Office action.

### *Response to Arguments*

3. Applicant's arguments filed 10/30/2014 have been fully considered but they are not persuasive for the following reasons:

*In response to Applicants' arguments* on page 7 that **Regarding independent claims 1 and** 17, Applicant's independent claims 1 and 17 recite, *inter alia, "[a first amplifier stage configured to ... amplify/amplifying* ... with a first amplifier stage] ... *when the first amplifier stage is enabled ...* and [a *second amplifier stage configured to ... amplify/amplifying* ... with a second amplifier stage] ... *when the second amplifier stage is enabled,"* which is not disclosed in Kaukovuori"."

*The Examiner's response is that* Kaukovuori FIG. 15 ***embodiment*** discloses that RFIC1 amplifier and RFIC2 amplifier both are inherently enabled {Emphasis Added} (see further in column 10 lines 22-46).

*In response to Applicants' arguments* on page 8 that Kaukovuori discloses: one potential method of receiving non-contiguous carrier aggregation signals is to receive separate clusters of component carriers in separate receiver chains, each having a LO signal of its own. This is depicted in FIG. 15, where Cluster 1 and Cluster 2 are each handled by a separate respective receiver chain, as shown in FIG. 15. (Kaukovuori, col.10, lns. 23-28; emphasis added).

*The Examiner's response is that* Kaukovuori FIG. 15 ***embodiment***, indeed, teaches method of receiving non-contiguous carrier aggregation signals is to receive separate clusters of component carriers in separate receiver chains, each having a LO signal of its own. FIG. 15 discloses a Radio Frequency Integrated Circuit (RFIC1) 1 including a first amplifier stage LNA, corresponding to the claimed first amplifier stage, to provide a first output RF signal (corresponding to the claimed first output RF signal, to a digital data path (corresponding to the claimed first load circuit). Furthermore, FIG. 15 discloses a Radio Frequency Integrated Circuit (RFIC2) 2 including a second amplifier stage LNA, corresponding to the claimed second amplifier stage, to provide a second output RF signal (corresponding to the claimed second output RF signal, to a different digital data path (corresponding to the claimed second load circuit). In column 10 lines 22-30, each separate received cluster (e.g. clusters 1 and 2) includes component carries that correspond to the claimed at least a first carrier of the multiple carrier and to the claimed at least a second carrier of the multiple carrier.

*In response to Applicants' arguments* on page 8 that when the clusters have unequal bandwidths, the choice of bandwidth (BW) setups for both receiver chains may be performed in order to reconfigure the receiver such that receiver performance is optimal. Typically, the first branch may be configured in a first mode to have a first bandpass filter bandwidth to give first bandpass filtered inphase and quadrature components, and may be configured in a second mode to have a first lowpass filter bandwidth to give first lowpass filtered inphase and quadrature components. In the first mode, a second branch may be configured, for example as shown in FIG. 24 within the dashed lines, and for example as shown in FIG. 10 or FIG. 11, to have a second bandpass filter bandwidth, different from the first bandpass filter bandwidth, to give second bandpass filtered inphase and quadrature components. In the second mode, the first branch may be used as a conventional DCR receiver, for example to receive single carrier or contiguous carrier signals, and the second branch, also referred to as an additional branch, may be not used, for example by being disconnected or turned off. (Kaukovuori, col. 13, lns. 28-46; emphasis added).

*The Examiner's response is that*, as recited in last Office action, Kaukovuori FIG. 15 ***embodiment*** the two clusters are each received with different bandwidth filter (see column 10, lines 22-53). Kaukovuori foregoing disclosure teaches the claimed features "at least a first carrier of the multiple carrier and to the claimed at least a second carrier of the multiple carrier". Applicants' arguments using FIG. 10 FIG. 11 and FIG. 24 are irrelevant since those figures represent different embodiments, which the current rejection is not relied on, in Kaukovuori teachings.

*In response to Applicants' arguments* on page 9 that

**35 U.S.C. § 103(a) Obviousness Rejections** NOTE: The rejection of claim 19 in the Office Action appears to contain a typographical error. Specifically, the Office Action rejected claims 1, 11, 12,

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