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QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER	
CHEN, JUNPENG	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GALIB ASADULLAH MOHIUDDIN MOHAMMED, RASHID AHMED AKBAR ATTAR, BRIAN MICHAEL GEORGE, and AMEER DABBAGH

Appeal 2016-008643[1]
Application 13/707,230
Technology Center 2600

Before CAROLYN D. THOMAS, ADAM J. PYONIN, and AMBER L. HAGY, *Administrative Patent Judges*.

HAGY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 5–8, 11–18, 22–27, and 29–31, which are all of the pending claims. (Final Act. 1.) We have jurisdiction over these claims under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellants identify Qualcomm Incorporated as the real party in interest. (App. Br. 2.)

Introduction

According to Appellants, "[e]mbodiments of the present invention . . . relate generally to wireless communication, and more specifically to devices, systems, and methods for enabling power conservation in communication devices." (Spec. ¶ 1.)

Exemplary Claim

Claim 1, reproduced below with the disputed limitations italicized, is exemplary of the claimed subject matter:

1. An access terminal, comprising:

a communications interface including a receiver circuit;

a low noise amplifier within the communications interface; and

a processing circuit coupled to the communications interface, the processing circuit being operable to make a determination that a preamble is not received during a slot when operating in a connected mode and to

power down the low noise amplifier (LNA) for at least a portion of the slot in response to the determination.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Agnor	US 4,417,246	Nov. 22, 1983
Ruijter	US 2013/0065546 A1	Mar. 14, 2013

REJECTIONS

Claims 1, 5, 8, 11, 12, 15–18, 22, 23, 26, 27, and 31 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ruijter.[2] (Final Act. 3–8.)

Claims 6, 7, 13, 14, 24, 25, 29, and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ruijter and Agnor. (Final Act. 9–14.)

ISSUE

Based on Appellants' arguments, the dispositive issue on appeal is whether Ruijter discloses

> a processing circuit coupled to the communications interface, the processing circuit being operable to make a determination that a preamble is not received during a slot when operating in a connected mode and to
>
> power down the low noise amplifier (LNA) for at least a portion of the slot in response to the determination[,]

as recited in independent claim 1.

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments the Examiner has erred. We disagree with Appellants' conclusions and we adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken (Final Act. 2–14) and (2) the reasons set forth by the Examiner in the Examiner's Answer in response to Appellants' Appeal Brief. (Ans. 2–16.) We concur with the

[2] Although claim 12 is not identified with the other claims in the Examiner's listing of claims rejected under 35 U.S.C. § 102(e) over Ruijter (Final Act. 3), claim 12 is discussed by the Examiner in the Final Rejection at page 5 as rejected on those grounds.

conclusions reached by the Examiner, and we highlight the following for emphasis.[3]

The Examiner finds Ruijter discloses all of the limitations of the independent claims (claims 1, 8, 15, 18, and 26). (Final Act. 3–8.) With regard to the term "connected mode," which is recited in all of the independent claims, the Examiner finds:

> When given its broadest reasonable interpretation, one with ordinary skill in the art would read "a connected mode" as, for example, a mode [in] which power is connected to [necessary] circuit elements to enable the radio/receiver. Since Ruijter discloses powering up the receiver temporarily and the radio is configured to periodically be enabled, Ruijter reasonably disclose[s] "a connected mode[."]

(Final Act. 2–3.) The Examiner further finds, with regard to the disputed limitations argued by Appellants on appeal, that Ruijter discloses "if there is no preamble detected, the receiver 100 (LNA 120, mixer 125, filter 140/150, etc.) is powered off and won't be on during the remaining portion of the longer time period for receiving the full packet . . . ." (Final Act. 4 (citing Ruijter, Figs. 1 and 3, and ¶¶ 13–16, 30).)

Appellants argue the Examiner's findings are in error because they are premised on an overly broad construction of the term "connected mode." (App. Br. 6–10.) In particular, Appellants argue: "The term 'connected mode' is a term of art, as is the term 'idle mode' that is also described in the specification." (App. Br. 8 (citing 3GPP TS 25.03 "Interlayer Procedures in Connected Mode," 3GPP TS 25.331, 3GPP TS 23.372 v 9.0.0 at 6.4 &

[3] Only those arguments made by Appellants have been considered in this decision. Arguments Appellants did not make in the briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

B.2.2a).) Appellants additionally argue that their Specification distinguishes between a described "connected state" (which they equate to the claimed "connected mode") and a described "dormant (or idle) state." (App. Br. 8–9 (citing Specification ¶ 25).) Appellants further argue Ruijter does not disclose powering down the receiver while in a "connected mode" because Ruijter "specifically states that the receiver is powered up temporarily, and is configured to periodically be enabled to detect whether any packets are received. These disclosures in [Ruijter] indicate that the receiver is operating in a conventional dormant mode with discontinuous reception (DRX)." (App. Br. 10.)

We are not persuaded of Examiner error. Turning first to Appellants' arguments regarding the construction of "connected mode," we disagree the Examiner's findings are premised on an unreasonably broad construction. It is well settled that, during prosecution, the terms of a claim must be given the broadest reasonable interpretation, consistent with Appellants' Specification, as they would be interpreted by one of ordinary skill in this art. *In re Morris,* 127 F.3d 1048, 1054–55 (Fed. Cir. 1997); *In re Zletz,* 893 F.2d 319, 321–22 (Fed. Cir. 1989). We find the Examiner's construction of "connected mode," as encompassing Ruijter's disclosure, is reasonable in light of the Specification. Although the Specification does not use the term "connected mode," it describes a "connected state" as one in which "the access terminal 104 and the base station 102 may send data to any other device." (Spec. ¶ 25 and Fig. 1.) And as the Examiner finds, and we agree, Ruijter discloses the receiver will periodically be enabled to detect whether a packet is received:

> [A] receiver may be powered up temporarily to determine whether any RF signals are directed to the receiver. If not, the receiver can be placed back into a low power mode and disabled. *For example, the radio can be configured to periodically be enabled to detect whether any packets are received. If there is no preamble detected, the receiver can be rapidly disabled.* Instead, upon a valid preamble detection, the receiver can remain on to obtain a full packet or at least a portion thereof to determine whether the packet is directed to the receiver. If so, *the radio can remain on for a longer time period to receive the full packet.* Otherwise, it can be powered off.

(Ruijter ¶ 30 (emphasis added); Ans. 15.) That is, the receiver of Ruijter's is "on" while detecting packets, and will then "remain on" to receive the data. *Id*. Thus, as the Examiner further finds, and we agree, when Ruijter's receiver checks for reception of a preamble, it is in a "connected mode," giving that term its broadest reasonable interpretation. (Ans. 15.)

Appellants argue that the ordinarily skilled artisan would, in light of Appellants' Specification, understand "connected mode" as recited in their claims to exclude a DRX mode, which they assert is disclosed by Ruijter. (App. Br. 9–10; Reply Br. 3–4, 6.) We disagree. Ruijter's disclosure of the receiver periodically checking for a preamble, and powering down if no preamble is received, closely tracks Appellants' own disclosure:

> According to at least one example, the access terminal 200 (e.g., the power regulation operations 212) may be adapted to *monitor a slot for an indicator* (e.g., *preamble*, DCI message), and to *power down the low noise amplifier* (LNA) 304 when an indicator is detected (e.g., when *no preamble is detected*, or when a DCI message indicates the access terminal is not scheduled for reception during the following subframes).
>
> ***
>
> For example, the processing circuit 202 (e.g., the power regulation module 310) can *detect for a preamble 504* during a

> length of time when a preamble 504 would be present if received. *During this detection period*, the low noise amplifier (LNA) 304 and other components of the receiver circuit 210 *remain in the active state* (e.g., powered ON), as indicated on the LNA power level diagram at 506.
>
> ***
>
> In response to determining at 510 *that no preamble was detected*, the processing circuit 202 (e.g., the power regulation module 310) can save the current power settings for the low noise amplifier (LNA) 304 (e.g., the current gain state) and can *set the low noise amplifier (LNA) 304 and other components of the receiver circuit 210 to the passive state* (e.g., powered down, placed in reduced powered state from full/normal power operation, or OFF) at 512, and as illustrated by the LNA power level diagram at 514.

(Spec. ¶¶ 39–41 (emphases added) and Fig. 5; *see also* App. Br. 2–3 (citing Figs. 2, 3, 5, 6, and ¶¶ 24, 30–31, 38, 39, and 45 as corresponding to claim 1).) Thus, contrary to Appellants' arguments, Appellants' Specification does not require construing "connected mode" as excluding Ruijter's disclosure.

For the foregoing reasons, we are not persuaded of error in the Examiner's 35 U.S.C. § 102(e) rejection of independent claim 1, or claims 5, 8, 11, 12, 15–18, 22, 23, 26, 27, and 31 not argued separately. We, therefore, sustain that rejection.

With regard to the Examiner's rejection of claims 6, 7, 13, 14, 23, 25, 29, and 30 under 35 U.S.C. § 103(a) over Ruijter and Agnor, Appellants do not present additional substantive arguments. Rather, Appellants argue these claims are patentable for the reasons argued with regard to independent claim 1, and further assert Agnor "fails to remedy the deficiencies of [Ruijter] with respect to independent claim 1." (App. Br. 13–14.) As noted

above, however, we do not agree Ruijter is deficient with regard to its disclosure of the subject matter of claim 1. We, therefore, also sustain the Examiner's 35 U.S.C. § 103(a) rejection of claims 6, 7, 13, 14, 23, 25, 29, and 30.

DECISION

For the above reasons, the Examiner's rejections of claims 1, 5–8, 11–18, 22–27, and 29–31 are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED