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

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

qualcomm@pattersonsheridan.com
PAIR_eOfficeAction@pattersonsheridan.com
ocpat_uspto@qualcomm.com
DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) from the Examiner’s Final Rejection of claims 1–34, which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.²

1 According to Appellants, the real party in interest is Qualcomm Incorporated. App. Br. 3.

STATEMENT OF THE CASE

Appellants’ invention relates to “techniques for sending control information to support operation on multiple CCs [component carriers in a wireless communication network].” Spec. ¶ 6. According to Appellants, “the UE [user equipment] may determine a first [primary] CC and a second CC configured for the UE [for carrier aggregation], with the first and second CCs being associated with different system configurations, e.g., different uplink-downlink configurations.” Spec. ¶ 137. “The downlink (or forward link) refers to the communication link from the base station to the UE, and the uplink (or reverse link) refers to the communication link from the UE to the base station.” Spec. ¶ 4. “The UE may receive an uplink grant sent on the first CC for uplink data transmission on the second CC.” Spec. ¶ 137.

Claims 1–34 are pending. Claims 1, 17, 33, and 34 are independent. Independent claim 1 is illustrative of the subject matter on appeal, as reproduced below with disputed limitations in italics.

1. A method for wireless communication, comprising:

   identifying a first component carrier (CC) and a second CC configured for a user equipment (UE) for carrier aggregation, the first and second CCs being associated with different system configurations, wherein the different system configurations comprise different uplink-downlink configurations; and

   [1] receiving an uplink grant sent on the first CC for uplink data transmission on the second CC, [2] wherein the uplink grant is sent on the first CC based on an uplink Hybrid Automatic Repeat Request (HARQ) timeline and [3] wherein the uplink HARQ timeline is based on the different uplink-downlink configurations.

EXAMINER’S REJECTIONS & REFERENCES


ANALYSIS

With respect to independent claim 1 and similarly, claims 17, 33, and 34, the Examiner finds Lin teaches most aspects of Appellants’ method for wireless communication including:

- identifying a first component carrier (CC) and a second CC configured for a user equipment (UE) for carrier aggregation, the first and second CCs being associated with different system configurations, wherein the different system configurations comprise different uplink-downlink configurations; and

  [1] receiving an uplink grant sent on the first CC [

[2] wherein the uplink grant is sent on the first CC based on an uplink Hybrid Automatic Repeat Request (HARQ) timeline, and [3] wherein the uplink HARQ timeline is based on the different uplink-downlink configurations.

Final Act. 2–3 (citing Lin ¶¶ 60–61, Figs. 3, 8, and 10).

The Examiner, however, acknowledges Lin does not specifically teach that “an uplink grant sent on the first CC” is “for uplink data transmission on the second CC,” but asserts that such a feature “is well known in the art and commonly used for improving [eNB’s] scheduling efficiency” as evidenced from Kim. Final Act. 3 (citing Kim ¶ 117).
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Appellants do not dispute the Examiner’s factual findings regarding Kim or the Examiner’s reason to incorporate Kim’s teachings into Lin’s method. Instead, Appellants dispute the Examiner’s factual findings regarding Lin. In particular, Appellants acknowledge Lin teaches “Systems and Methods for supporting carrier aggregation with different TDD configurations [shown in Figures 3, 4, and 8]” App. Br. 7–8 (citing Lin’s Abstract, Figs. 3, 8); see also Lin ¶ 38 (carrier aggregation . . . may be supported in Time Division Duplex (TDD) mode . . . or Frequency Division Duplex (FDD) mode).

Lin’s Figure 3 is reproduced below:

<table>
<thead>
<tr>
<th>UL-DL CONFIG</th>
<th>SWITCH POINT PERIODICITY</th>
<th>SUBFRAME NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0 1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>0</td>
<td>5ms</td>
<td>D S U U U D S U U U</td>
</tr>
<tr>
<td>1</td>
<td>5ms</td>
<td>D S U U D D S U U D</td>
</tr>
<tr>
<td>2</td>
<td>5ms</td>
<td>D S U D D D S U D D</td>
</tr>
<tr>
<td>3</td>
<td>10ms</td>
<td>D S U U U D D D D D</td>
</tr>
<tr>
<td>4</td>
<td>10ms</td>
<td>D S U U D D D D D D</td>
</tr>
<tr>
<td>5</td>
<td>10ms</td>
<td>D S U D D D D D D D</td>
</tr>
<tr>
<td>6</td>
<td>5ms</td>
<td>D S U U U D S U U D</td>
</tr>
</tbody>
</table>

Lin’s Figure 3 shows a table of different uplink-downlink (UL-DL) configurations for use in wireless communication systems such as GPP Long Term Evolution (LTE/LTE-A) specification.
Lin’s Figure 8 is reproduced below:

<table>
<thead>
<tr>
<th>UL-DL CONFIG</th>
<th>SUBFRAME NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
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<tr>
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<tr>
<td>3</td>
<td>-</td>
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<tr>
<td>4</td>
<td>-</td>
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<tr>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
</tr>
</tbody>
</table>

**TDD HARQ FEEDBACK TIMETABLE**

Lin’s Figure 8 shows a hybrid automatic retransmission (HARQ) feedback timetable in an LTE/LTE-A system as a function of different uplink-downlink (UL-DL) configurations.

However, Appellants contend that the combination of Lin and Kim does not teach or suggest:

“[1] receiving an uplink grant sent on the first CC for uplink data transmission on the second CC, [2] wherein the uplink grant is sent on the first CC based on an uplink Hybrid Automatic Repeat Request (HARQ) timeline and [3] wherein the uplink HARQ timeline is based on the different uplink-downlink configurations”

as recited in claim 1 (emphasis in original). App. Br. 7–12; Reply Br. 2–5.

Particularly, Appellants acknowledge Lin teaches “sending uplink grants for subframes 4 and 9, to schedule PUSCH and/or PUCCH in the subframes 4
and 9, so that the SCELL [secondary cell] is able to transmit HARQ feedback in those subframes according to its normal HARQ feedback timetable prescribed in the Table of FIG. 8” (Reply Br. 4), but argue Lin does not teach “when the uplink grants are sent” because “Lin fails to describe in what subframes the corresponding grants are sent.” App. Br. 10–11; Reply Br. 4–5. Second, Appellants acknowledge Lin’s “uplink grants are sent” but argue Lin does not teach or suggest “when or how the uplink grant(s) are sent, much less that they are sent based on an uplink Hybrid Automatic Repeat Request (HARQ) timeline.” App. Br. 11; Reply Br. 5.

Lastly, Appellants argue Lin does not teach or suggest “any uplink HARQ timeline based on the different uplink-downlink configurations.” App. Br. 11–12 (emphasis in original). According to Appellants, Lin only teaches “a HARQ timeline based on the uplink-downlink configuration of the second CC.” Id. at 12.

Appellants’ arguments are not persuasive. Instead, we find the Examiner has provided a comprehensive response to Appellants’ arguments supported by a preponderance of evidence. Ans. 12–16. Therefore, we adopt the Examiner’s findings and explanations provided therein. Id. For additional emphasis, we note much of Appellants’ arguments are not commensurate in scope with claims 1, 17, 33, and 34, and, as such, do not demonstrate error in the Examiner’s rejection of claims 1, 17, 33, and 34. See In re Self, 671 F.2d 1344, 1348 (CCPA 1982) (limitations not appearing in the claims cannot be relied upon for patentability).

For example, claim 1 only requires, in relevant part: “wherein the uplink grant is sent . . . based on an uplink Hybrid Automatic Repeat
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Request (HARQ) timeline” (emphasis added). Claims 16 and 33 recite similar limitations.

As acknowledged by Appellants, Lin teaches “sending uplink grants . . . according to its normal HARQ feed back timetable prescribed in the Table of Fig. 8.” Reply Br. 4; see also Lin ¶¶ 60–61 (“eNB always schedule UL grant for SCELL in subframe 4 and subframe 9 such that HARQ feedback for SCELL can be transmitted (e.g., through PUSCH with HARQ ACK/NACK piggyback). In other words, Lin teaches the claimed “wherein the uplink grant is sent . . . based on an uplink Hybrid Automatic Repeat Request (HARQ) timeline” recited in Appellants’ claim 1 (emphasis added) regardless of “when or how the uplink grant(s) are sent” as Appellants argue. App. Br. 10–11; Reply Br. 4–5.

As further recognized by the Examiner, Lin also teaches “wherein the uplink HARQ timeline is based on the different uplink-downlink configurations” as recited in claim 1, and similarly recited in claims 17, 33, and 34. Ans. 13–16. For example, Lin’s Figure 8, as reproduced above, shows a hybrid automatic retransmission (HARQ) feedback timetable in an LTE/LTE-A system as a function of different uplink-downlink (UL-DL) configurations. Likewise, Lin’s Figure 4 shows an example of carrier aggregation in different uplink-downlink configurations, as reproduced below with additional markings for illustration:
As shown in Lin’s Figure 4, primary cell (PCELL) is configured for user equipment (UE) over 1st carrier component (CC) in a 1st uplink-downlink (UL-DL) configuration (e.g., PCELL with TDD configuration 1), whereas second cell (SCELL) is configured for UE over 2nd carrier component (CC) in a 2nd uplink-downlink (UL-DL) configuration (e.g., SCELL with TDD configuration 0). As correctly recognized by the Examiner, “DL/UL overlap subframes 4 and 9 are PCELL of configuration 1 in DL (downlink) and SCELL of configuration 0 in UL (uplink).” Ans. 13. (emphasis added). In other words, subframes 4 and 9 according to HARQ feedback timetable are based on the claimed “different uplink-downlink configurations” as recited in claim 1, and similarly recited in claims 17, 33, and 34.

For the above reasons, we sustain the Examiner’s rejection of independent claims 1, 17, 33, and 34, and dependent claims 2–16 and 18–32, which Appellants do not argue separately. App. Br. 12.

CONCLUSION

On the record before us, we conclude Appellants have not demonstrated the Examiner erred in rejecting claims 1–34 under 35 U.S.C. § 103.
DECISION

As such, we affirm the Examiner’s final rejection of claims 1–34 under 35 U.S.C. § 103.

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