Appeal decision

Appeal No. 2018-9197

Appellant	NTT DOCOMO, INC
Patent Attorney	ITO, Tadashige
Patent Attorney	ITO, Tadahiko
Patent Attorney	ISHIHARA, Takaji

The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2016-534742, entitled "USER EQUIPMENT, BASE STATION, AND UPLINK CARRIER AGGREGATION COMMUNICATION METHOD" (International Publication No. WO 2016/072443, published on May 12, 2016) has resulted in the following appeal decision.

Conclusion

The appeal of the case was groundless.

Reason

No. 1 History of the procedures

The present application was originally filed on November 5, 2015 (Priority date: November 7, 2014, January 28, 2015, May 14, 2015) as an International Patent Application, and the history of the procedures is as follows.

November 30, 2016	Submission of written amendment							
as of April 4, 2017	Notification of reasons for refusal							
May 30, 2017	Submission of written opinion and written							
amendment								
as of July 26, 2017	Notification of reasons for refusal							
September 13, 2017	Submission of written opinion and written							
▲ ·	Submission of written opinion and written							
amendment	Submission of written opinion and written							

February 2, 2018	Submission	of	written	opinion	and	written	
amendment							
as of March 28, 2018	Examiner's decision of refusal						
July 3, 2018	Appeal against the examiner's decision of refusa						
Submission of written emendment							

Submission of written amendment

No. 2 Decision to dismiss amendment regarding the written amendment submitted on July 3, 2018

[Conclusion of Decision to Dismiss Amendment]

The amendment made on July 3, 2018 (hereinafter referred to as "the Amendment") shall be dismissed.

[Reason]

1. Outline of the amendment

The Amendment includes amending the following invention described in Claim 1 of the scope of claims amended by the amendment made on February 2, 2018 (hereinafter referred to as "the Invention"),

"User equipment having an uplink carrier aggregation function, comprising:

a radio communication control unit configured to control radio communication with a base station; and

an interfered system information reporting unit configured to report to the base station the type of each radio communication system using an unlicensed band incurring interference due to uplink carrier aggregation",

to the following invention described in Claim 1 of the scope of claims amended by the Amendment (hereinafter referred to as "Amended Invention"; amended portions are underlined),

"User equipment having an uplink carrier aggregation function, comprising:

a radio communication control unit configured to control radio communication with a base station; and

an interfered system information reporting unit configured to report to the base station <u>at least one type of WLAN and Bluetooth</u> incurring interference due to uplink carrier aggregation."

2. Propriety of the amendment

(1) Whether or not new matter exists, whether or not shift amendment exists, and requirements for purpose of amendment

Regarding the "interfered system information reporting unit configured to report to the base station at least one type of WLAN and Bluetooth incurring interference due to uplink carrier aggregation" in the Amended Invention, the original specification of the application, the scope of claims, and drawings (hereinafter referred to as "original specification, etc." do not clearly describe that the interfered system information reporting unit reports at least one type of WLAN and Bluetooth to the base station.

FIG. 17 in the original specification, etc. of the application illustrates that an interference cause indication unit indicates to the base station "victim SystemInfo-r11", that is "wlan" or "bluetooth" as a type of the system incurring interference due to uplink carrier aggregation. However, "wlan" or "bluetooth" is not information on an interference cause, but information on an interfered system.

Accordingly, the matter that the interfered system information reporting unit reports "wlan" or "bluetooth", which is information on an interfered system, or "at least one type of WLAN and Bluetooth incurring interference due to uplink carrier aggregation", to the base station is not to introduce a new technical matter to the matters described in the original specification, etc. of the application.

Therefore, the Amendment was made within the scope of matters described in the original specification, etc. of the application, and does not violate the provisions of Article 17-2(3) (new matter) of the Patent Act.

Since the Amendment is to make the concept narrower, regarding a radio communication system incurring interference due to uplink carrier aggregation, from "radio communication system using an unlicensed band" to "at least one of WLAN and Bluetooth", the Amendment aims at the restriction of the scope of claims.

Thus, the Amendment does not violate the provisions of Article 17-2(4) (shift amendment) of the Patent Act, obviously.

(2) Independent requirements for patentability

The above amendment aims at the restriction of the scope of claims. Then whether or not the appellant should be granted a patent for the Amended Invention independently at the time of patent application will be examined below.

A The Amended Invention

The Amended Invention is acknowledged as indicated in "1.".

B Priority

The following applications are the basis of priority claim of the Application. Japanese Patent Application No. 2014-227473 (Filing date: November 7, 2014) Japanese Patent Application No. 2015-14550 (Filing date: January 28, 2015) Japanese Patent Application No. 2015-98863 (Filing date: May 14, 2015) Japanese Patent Application No. 2015-160090 (Filing date: August 14, 2015)

However, the matter specifying the Amended Invention, "an interfered system information reporting unit configured to report to the base station at least one type of WLAN and Bluetooth incurring interference due to uplink carrier aggregation", which is described in an original specification, etc. of Japanese Patent Application No. 2015-160090, is not described in the original specifications, etc. of Japanese Patent Application No. 2014-227473, Japanese Patent Application No. 2015-14550, and Japanese Patent Application No. 2015-98863.

The appellant does not show evidences for the above matter, such as specific descriptions in the original specifications, etc. of Japanese Patent Application No. 2014-227473, Japanese Patent Application No. 2015-14550, and Japanese Patent Application No. 2015-98863.

Therefore, priority claim of the Amended Invention based on Japanese Patent Application No. 2014-227473, Japanese Patent Application No. 2015-14550, and Japanese Patent Application No. 2015-98863 is not approved. The reference date for judgment on inventive step stipulated in Article 29(2) of the Patent Act is acknowledged as August 14, 2015, which is the filing date of Japanese Patent Application No. 2015-160090.

C Described matters in Cited Documents, etc. and Cited Invention, etc.

(A) Cited Invention

NTT DOCOMO, INC., WF on 2UL inter-band CA protection of GNSS, 3GPP TSG-RAN WG4 Meeting #73 R4-147274, https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_73/Docs/R4-147274.zip, uploaded on November 11, 2014 (hereinafter referred to as "Cited Document 1") cited in the reasons for refusal of the examiner's decision describe the following matters (the underlines were added by the body).

a "1. Introduction

In the RAN#72bis meeting, several solutions to address GNSS interference due to IMD of 2UL inter-band CA were discussed but no consensus was reached [1-4]. In this contribution, we discuss how to handle this issue and propose the solution for the Rel-12 timeframe." (page 1)

b "2.1 Solution overview

Firstly, we discuss a solution relying on eNB scheduling with the assistance information from the UE. As discussed in the last meeting, <u>it would be effective for UE to indicate</u> confronting GNSS interference to eNB so that the eNB can take proper action to avoid the interference in the GNSS receiver. Possible actions the eNB can take are:

• Allocate the UL resource blocks among two component carriers with which the IMD does not fall into the frequency range of GNSS receiver.

- Allocate the UL resource block only on a single carrier.
- Apply A-MPR to protect GNSS.
- Deconfigure UL CA or deactivate SCell(s).

2.2 Signalling assistance from UE

For the eNB to take these actions, we propose the following assistance signaling procedure together with the UE.

• Condition on the UE assistance signaling

The eNB should apply the above actions only when the 2UL inter-band CA combination which could interfere in GNSS is configured for the UE. The UE assistance signaling for the appropriate eNB action is required only for that case. For this to work, the eNB should enable the UE to send assistance information (namely Signaling A below) when the concerning 2UL inter-band CA is configured. If deconfigured, the eNB should also disable the UE to send Signaling A.

• <u>Signaling A (from UE to eNB)</u>

Under the conditions above, <u>UE indicates the following information to eNB.</u>

* GNSS ON/OFF

Alternatively, the UE indicates the GNSS interference problem when the UE detects like the In-Device Coexistence solution specified in RAN2 [7]. However, such a reactive approach may be too late to meet the regulatory requirement to obtain and provide location information. To avoid the GNSS interference proactively, the eNB should be able to know when the GNSS receiver is turned on/off by the UE.

* <u>Tracked GNSS system (GPS, GLONASS, Galileo, etc...)</u> or the center frequency and bandwidth of the GNSS system.

• If eNB can identify the tracked GNSS system or the center frequency and bandwidth of the GNSS system, the impact of restriction due to scheduling can be mitigated as little as possible.

• If UE tracks new GNSS system, it should be indicated accordingly." (pages 1-2)

According to the above descriptions and common general technical knowledge of a person skilled in the art, Cited Document 1 describes the following technical matters.

(a) According to the description in the above b, when the concerning 2UL inter-band CA is configured, the eNB enables the UE to send "Signaling A". Since the 2UL interband CA has been configured, it is obvious to a person skilled in the art that the UE has a 2UL inter-band CA function. Therefore, it can be said that Cited Document 1 describes a "UE having a 2UL inter-band CA function".

(b) According to the description in the above b, it can be said that the UE sends Signaling A to the eNB. They are matters of common general technical knowledge that UE controls radio communication with the eNB to send a signaling to the eNB and comprises a function unit to implement the function. Thus, it can be said that Cited Document 1 describes a UE having "a function unit for controlling radio communication with an eNB".

(c) According to the description in the above b, where the 2UL inter-band CA combination which could interfere in GNSS is configured for the UE so that the eNB can take proper action to avoid the interference in the GNSS receiver, it ca be said that the UE indicates GNSS (GPS, GLONASS, Galileo, etc.) included in the Signaling A to the eNB. According to the description in the above a, it can be said that the interference in the GNSS receiver is GNSS interference due to IMD of 2UL inter-band CA. Thus, it can be said that Cited Document 1 describes a UE having "a function unit for indicating GNSS (GPS, GLONASS, Galileo, etc.) incurring interference due to IMD of 2UL inter-band CA to eNB so that the eNB can take proper action to avoid GNSS interference due to IMD of 2UL inter-band CA".

Therefore, it is recognized that Cited Document 1 describes the following invention (hereinafter referred to as "Cited Invention").

"A UE having 2UL inter-band CA function comprising:

a function unit for controlling radio communication with an eNB; and

a function unit for indicating GNSS (GPS, GLONASS, Galileo, etc.) incurring interference due to IMD of 2UL inter-band CA to eNB so that the eNB can take proper action to avoid GNSS interference due to IMD of 2UL inter-band CA."

(B) Publicized prior art

Qualcomm Incorporated, In-Device Coexistence Improvements (for UL interband CA interference on GNSS receiver), 3GPP TSG-RAN WG2 Meeting #88 R2-145162, https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_88/Docs/R2-145162.zip, uploaded on November 8, 2014 (hereinafter referred to as "Publicly Known Example 2") cited in the reasons for refusal of the examiner's decision describe the following matters (the underlines were added by the body).

a "4 Conclusion

To protect GNSS reception while simultaneously transmitting on multiple uplink component carriers, we propose the following to extend existing IDC solution. <u>An</u> example ASN.1 change of the signaling message is included in the Appendix.

Proposal 1: RAN2 is respectfully requested to consider the following options, as RAN4 has been discussing the same issue.

a) Use the existing signaling for UE to recommend to the network to stop UL scheduling on SCell when the UL intermod interference problem happens.

b) Introduce new signaling for UE to indicate to the eNB about the UL intermod interference problem.

c) Introduce new signaling for UE to send assistance information to help eNB avoid allocating problematic RB combinations in UL.

(Omitted)

Appendix: Example 36.331 signaling changes for the proposals

6.2.2 Message definitions

- InDeviceCoexIndication

<u>The InDeviceCoexIndication message is used to inform E-UTRAN about IDC problems</u> which cannot be solved by the UE itself, as well as to provide information that may assist E-UTRAN when resolving these problems. Signaling radio bearer: SRB1 RLC-SAP: AM Logical channel: DCCH Direction: UE to E UTRAN" (pages 3-4)

b "

InDeviceCoexIndication message

```
-- ASN1START
                                                  SEQUENCE {+
InDeviceCoexIndication-r11 ::=
     criticalExtensions CHOICE (*
c1 CHOICE (*
inDeviceCoexIndication-r11 I
                                                                               InDeviceCoexIndication-r11-IEs,+
                spare3 NULL, spare2 NULL, spare1 NULL
                                                            SEQUENCE {}+
            criticalExtensionsFuture
     } +1
}+

      "
      InDeviceCoexIndication-r11-IES ::= SEQUENCE {*/

      affectedCarrierFreqList-r11
      AffectedCarrierFreqList-r11
      OPTIONAL,*/

      tdm-AssistanceInfo-r11
      TDM-AssistanceInfo-r11
      OPTIONAL,*/

      lateNonCriticalExtension
      OCTET STRING
      OPTIONAL,*/

      nonCriticalExtension
      InDeviceCoexIndication-r11-v11xy-IES
      OPTIONAL,*/

34
InDeviceCoexIndication-v11xy-IEs ::= SEQUENCE {+
      idc-UlResourceAllocationPattern-r11 CHOICE (+
           -UlResourceAllocationPattern-Fil CHOICE {"
cancelULResourceAllocationPattern NULLy"
ulResourceAllocationPattern SEQUENCE {"
idcEmergencyCallOngoing-Fil ENUMERATED {true} OPTIONAL,"
victimSystemList-ril VictimSystemList-ril,"
interModeOrderList-ril InterModeOrderList-ril OPTIONAL"
      nonCriticalExtension SEQUENCE {} OPTIONAL*
3+
AffectedCarrierFreqList-r11 ::= SEQUENCE (SIZE (1..maxFreqIDC-r11)) OF AffectedCarrierFreq-r11+
AffectedCarrierFreq-rl1 ::= SEQUENCE {
    carrierFreq-rl1 MeasObjectId,
    interferenceDirection-rl1 ENUMERATED {eutra, other, both, spare}

VictimSystemList-r11 ::= SEQUENCE (SIZE (1..maxFreqIDC-Victim-r11)) OF VictimSystem-r11+
VictimSystem-r11 ::= SEQUENCE {+'
     victimSystemType-r11
                                                       ENUMERATED (GPS, Glonass, BDS, Galileo,
                                               reserved4, reserved3, reserved2, reserved1}+
10
InterModeOrderList-r11 ::= SEQUENCE (SIZE (1..4)) OF InterModeOrderFreqList-r11+
InterModeOrderFreqList-r11 ::= SEQUENCE (SIZE (1..maxFreqIDC-r11)) OF InterModeOrder-r11+
*
InterModeOrder-r11 ::= SEQUENCE {+
    INTEGER (-7..7) OPTION
                                       OPTIONAL.
34
```

" (pages 4-5)

According to the description in the above a, the UE transmits the InDeviceCoexIndication message to E-UTRAN about UL intermod interference problem, which is IDC problem which cannot be solved by the UE itself. According to the InDeviceCoexIndication message in the above b, the InDeviceCoexIndication message includes victimSystemType, which is the type of a system incurring interference.

Therefore, Publicly Known Example 2 is recognized as describing the following technology (hereinafter referred to as "Publicized Prior Art").

"UE transmits the type of a system incurring interference to E-UTRAN about UL intermod interference problem."

(C) Well-Known Matter 1

3GPP TR 36.860 V0.3.0 which is a technical report of standardization project 3GPP relating to radio communication, https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_68Bis/docs/R4-134778.zip, updated on September 30, 2013 (hereinafter referred to as "Well-Known Example 8") describe the following matters. (The underlines were added by the body.)

"<u>When 2ULs inter-band CA UE is operating with other systems such as WiFi,</u> <u>Bluetooth, and the GNSS system, the harmonics and intermodulation products can have</u> <u>impact on these systems.</u> Table 5.2.1-2 is given for the general IMD/harmonics analysis to coexist with ISM bands and GNSS system. From this table, the harmonics and IMD issues can be summarized." (page 8)

According to the above description and common general technical knowledge of a person skilled in the art, the matter described in Well-Known Example 8 that "the intermodulation products" are IMD (intermodulation distortion) is obvious to a person skilled in the art. Thus, it can be said that the harmonics and IMD of 2UL inter-band CA affects, or interferes with, WiFi, Bluetooth, and GNSS.

Therefore, the matter that "IMD of 2UL inter-band CA interferes with WiFi, Bluetooth, and GNSS" is recognized as a well-known matter (hereinafter referred to as "Well-Known Matter 1") in the field of radio communication technology, as indicated in Well-Known Example 8 which is a technical report of 3GPP, for example.

D Comparison and Judgment

The Amended Invention and the Cited Invention are compared below.

(A) The "2UL inter-band CA function" in the Cited Invention is included in the "uplink carrier aggregation function". The "UE" in the Cited Invention corresponds to the "user equipment" in the Amended Invention.

Therefore, the "UE having 2UL inter-band CA function" in the Cited Invention is included in the "User equipment having an uplink carrier aggregation function" in the Amended Invention.

(B) The "eNB" in the Cited Invention corresponds to the "base station" in the Amended Invention. The "function unit" in the "function unit for controlling radio communication with an eNB" in the Cited Invention can be arbitrary called "a radio communication control unit".

Therefore, the "function unit for controlling radio communication with an eNB" in the Cited Invention corresponds to the "radio communication control unit configured to control radio communication with a base station" in the Amended Invention.

(C) The "interference" in "incurring interference due to IMD of 2UL inter-band CA ..." in the Cited Invention is included in the "interference" in "incurring interference due to uplink carrier aggregation ..." in the Amended Invention.

The "WLAN and Bluetooth" in the Amended Invention and the "GNSS (GPS, GLONASS, Galileo, etc.)" in the Cited Invention are identical in the point of each being a radio communication system.

The matter that the UE indicate information on the UE itself to the eNB is nothing less than a report. Accordingly, the "function unit" of the "function unit for indicating GNSS (GPS, GLONASS, Galileo, etic.) incurring interference due to IMD of 2UL inter-band CA ..." in the Cited Invention is to report GNSS incurring interference due to IMD of 2UL inter-band CA, or an interfered system. Thus, the "function unit" can be arbitrarily called "an interfered system information reporting unit".

Therefore, the "interfered system information reporting unit configured to report at least one type of WLAN and Bluetooth incurring interference due to uplink carrier aggregation, to the base station" in the Amended Invention and the "a function unit for indicating GNSS (GPS, GLONASS, Galileo, etic.) incurring interference due to IMD of 2UL inter-band CA to eNB" in the Cited Invention are identical in point of being "an interfered system information reporting unit configured to report to the base station a radio communication system incurring interference due to uplink carrier aggregation".

In light of the above, a corresponding feature and different features between the Amended Invention and the Cited Invention are as follows:

(Corresponding feature)

"User equipment having an uplink carrier aggregation function, comprising:

a radio communication control unit configured to control radio communication with a base station; and

an interfered system information reporting unit configured to report to the base station a radio communication system incurring interference due to uplink carrier aggregation".

(Different Feature 1)

Regarding the "radio communication system incurring interference due to uplink carrier aggregation" in the corresponding feature, the Amended Invention indicates "at least one of WLAN and Bluetooth", while the Cited Invention indicates "GNSS (GPS, GLONASS, Galileo, etc.)".

(Different Feature 2)

Regarding an attribute of a radio communication system to be reported to the base station by the "interfered system information reporting unit" in the corresponding feature, the Amended Invention indicates "type", while the Cited Invention does not clearly indicate "type".

The above-mentioned different features are examined below.

(Different Feature 1)

As described in the "Well-Known Matter 1" acknowledged in the above C (C), it is well-known that "IMD of 2UL inter-band CA interferes with WiFi, Bluetooth, and GNSS". In the field of radio communication technology, it is common that different radio communication systems to be interfered with avoid interference by the same processing with respect to the same interference cause. Thus, in the Cited Invention, a person skilled in the art could have appropriately employed WiFi or Bluetooth, as a radio communication system to be interfered with, which is to be reported to a base station, in order to avoid interference to WiFi or Bluetooth due to IMD of 2UL interband CA, by the same processing as the processing by an eNB to avoid GNSS interference due to IMD of 2UL inter-band CA.

(Different Feature 2)

As acknowledged in the above C (B), the matter "UE transmits the type of a system incurring interference to E-UTRAN about UL intermod interference problem" is

Publicized prior art. It is obvious to a person skilled in the art that the "UL intermod interference" is interference due to IMD of UL inter-band CA. Accordingly, both Cited Invention and Publicized prior art resolve interference due to IMD of UL interband CA, it is not significantly difficult to employ the Publicized prior art to the Cited Invention and there is no disincentive.

Therefore, a person skilled in the art could have appropriately employed the Publicized prior art to the Cited Invention to use "type" as an attribute of information of an interfered system to be reported to a base station.

The effects of the Amended Invention are also produced within a range which can be predicted by a person skilled in the art from the Cited Invention, Publicized Prior Art, and Well-Known Matter 1.

Accordingly, the Amended Invention is an invention which could have been easily made by a person skilled in the art based on the Cited Invention, Publicized priorart, and Well-Known Matter 1. The appellant should not be granted a patent for the invention independently at the time of patent application under the provisions of Article 29(2).

3. Closing on the Amendment

In light of the above, the Amendment violates the provisions of Article 126(7) of the Patent Act which is applied mutatis mutandis in the provisions of Article 17-2(6) of the Patent Act, and the Amendment shall be dismissed under the provisions of Article 53(1) of the Patent Act which is applied mutatis mutandis by replacing relevant terms pursuant to Article 159(1) of the Patent Act.

Accordingly, in conclusion, the above-mentioned decision to dismiss the amendment has been made.

No. 3 Regarding the Invention

1. The Invention

The Amendment was dismissed as described above. The invention according to the claims of the application is specified by the matters described in Claims 1 to 4 of

the scope of claims amended by the written amendment submitted on February 2, 2018. The invention according to Claim 1 is acknowledged as the Invention indicated in "No. 2" "1.".

2. Reasons for refusal stated in the examiner's decision

The summary of the reasons for refusal of the examiner's decision is as follows: "(Inventive step) The invention according to the claims of the application is an invention which could have been easily made by a person ordinarily skilled in the art of the inventions before the filing of the application based on the inventions described in the following publications distributed or inventions made available to the public through electric telecommunication lines in Japan or foreign countries before the filing of the application. Therefore, the appellant should not be granted a patent under the provisions of Article 29(2) of the Patent Act."

The following publications 1-2 are cited and the following publications 5-7 are presented as documents showing well-known arts for Claim 1.

1. NTT DOCOMO, INC., WF on 2UL inter-band CA protection of GNSS [online],3GPP TSG-RAN WG4 Meeting #73 R4-147274, November 11, 2014, [retrieved on2015.12.25],Retrieved from the Internet<URL:https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_73/Docs/R4-</td>147274.zip>

2. Qualcomm Incorporated, In-Device Coexistence Improvements (for UL inter-band CA interference on GNSS receiver), 3GPP TSG-RAN WG2 Meeting #88 R2-145162 [online], [retrieved on 2017.12.06], Retrieved from the Internet: <URL: https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_88/Docs/R2-145162.zip>, November 8, 2014, p. 1-p. 8

- 5. National Publication of International Patent Application No. 2014-527380
- 6. National Publication of International Patent Application No. 2013-520879
- 7. International Publication No. 2014/053939

3. Cited Inventions, etc.

(1) Cited Invention

The Cited Invention described in Cited Document 1 is as acknowledged in "No. 2" "2." "(2)" "C" "(A)".

(2) Publicized prior art

The Publicized prior art described in Publicly Known Example 2 is as acknowledged in "No. 2" "2." "(2)" "C" "(B)".

(3) Well-Known Matter 2

National Publication of International Patent Application No. 2014-527380 (hereinafter referred to as "Well-Known Example 5") cited in the reasons for refusal of the examiner's decision describes the following matters. (The underlines were added by the body.)

"[0019]

The user equipment 102 includes multiple transceivers employing different wireless technologies. In the example of FIG. 1, the transceivers include a Mobile Wireless Standards (MWS) transceiver and an Industrial, Scientific and Medical (ISM) band transceiver. In other embodiments, other numbers of transceivers and other combinations of wireless technologies can be employed instead. For example, the MWS transceivers can include Long Term Evolution (LTE) transceivers, Worldwide Interoperability for Microwave Access (WiMAX) transceivers, and the like, and the ISM band transceivers can include WiFi transceivers, Bluetooth transceivers, ZigBee (TM) transceivers, and the like. The transceivers can include two MWS transceivers or two ISM transceivers. The ISM band equipment can also include receive-only devices such as global positioning system (GPS) receivers, frequency modulation (FM) radio receivers, and the like."

National Publication of International Patent Application No. 2013-520879 (hereinafter referred to as "Well-Known Example 6") cited in the reasons for refusal of the examiner's decision describes the following matters. (The underlines were added by the body.)

"[0017]

The first antenna 235 may be positioned at a lower right portion of the wireless communications device 200, and the second antenna 240 may be positioned at an upper right portion of the wireless communications device 200. The first antenna 235 may be a cellular antenna, a GSM (TM) antenna, a CDMA antenna, a WCDMA antenna, or any other antenna capable of operating using the licensed spectrum. The second antenna 240 may be a WiFi antenna, a GPS antenna, or any other antenna capable of operating using the unlicensed spectrum. The power source 245 supplies power to the

components or modules shown in FIG. 2. For illustrative purposes, each node A, B, C, and D shown in FIG. 1 is a wireless communications device 200 as shown in FIG. 2."

International Publication No. 2014/053939 (hereinafter referred to as "Well-Known Example 7") cited in the reasons for refusal of the examiner's decision describes the following matters. (The underlines were added by the body.)

"Wi-Fi uses frequency band 2400-2495 MHz in the ISM band. This band is divided into 14 channels, where each channel has a bandwidth of 22 MHz, and 5 MHz separation from other channel with an exception of channel number 14 where separation is 12 MHz. The transmitter of LTE band 40 will affect a receiver of WiFi and vice-versa. Since band 7 is a Frequency Division

Duplexing (FDD) band so there is no impact on a LTE receiver from a Wi-Fi transmitter but the Wi-Fi receiver will be affected by an LTE Uplink (UL) transmitter. Bluetooth operates between 2402-2480 MHz, in 79 channels of 1 MHz bandwidth each. Therefore similar to Wi-Fi, there are interference between band 40 and Bluetooth as well as interference from band 7 UL to Bluetooth Receiver (RX).

Furthermore, <u>the reception of GNSS in the ISM band, e.g. Indian Regional Navigation</u> Satellite System that operates at 2483.5-2500MHz, can be affected by band 7 UL <u>transmission.</u>" (page 3, lines 10 to 23)

According to Well-Known Examples 5 to 7, GNSS is a radio communication system using ISM band. The IMS band, which is used for WiFi or Bluetooth, is considered an unlicensed band.

Therefore, the matter that "GNSS is a radio communication system using an unlicensed band" is, as indicated in Well-Known Examples 5 to 7, a well-known matter (hereinafter referred to as "Well-Known Matter 2") in radio communication technology.

4. Comparison and judgment

The Invention is to make the concept generic, from the Amended Invention, regarding an interfered system to be reported to a base station relating to Different Feature 1 between the Amended Invention and the Cited Invention, indicated in the above "No. 2" "2." "(2)" "D", from "at least one type of WLAN and Bluetooth" to "each radio communication system using an unlicensed band".

Accordingly, a corresponding feature and different features between the Invention and the Cited Invention are as follows:

(Corresponding Feature)

The Corresponding Feature is the same as the corresponding feature between the Amended Invention and the Cited Invention as indicated in "No. 2" "2." "(2)" "D".

(Different Feature 1)

Regarding the "radio communication system incurring interference due to uplink carrier aggregation" in the Corresponding Feature, the Invention specifies "each radio communication system using an unlicensed band", while the Cited Invention, which specifies "GNSS (GPS, GLONASS, Galileo, etc.)", does not clearly specifies "each radio communication system using an unlicensed band".

(Different Feature 2)

Different Feature 2 is the same as Different Feature 2 between the Amended Invention and the Cited Invention as indicated in "No. 2" "2." "(2)" "D".

The above-mentioned different features are examined below.

(Different Feature 1)

As described in Well-Known Matter 2 acknowledged in the above "No. 3" "(3)", the matter that "GNSS is a radio communication system using an unlicensed band" is a well-known matter. Thus, the "GNSS (GPS, GLONASS, Galileo, etc.)" in the Cited Invention is considered to be each radio communication system using an unlicensed band.

Therefore, Different Feature 1 is not a substantial different feature between the Invention and the Cited Invention.

(Different Feature 2)

According to the examination relating to Different Feature 2 indicated in "No. 2" "2." "(2)" "D", the configuration relating to Different Feature 2 of the Invention could have been appropriately implemented by a person skilled in the art from the Cited Invention and Publicized Prior Art.

The effects of the Invention are also produced within a range which can be predicted by a person skilled in the art from the Cited Invention, Publicized prior art, and Well-Known Matter 2. Therefore, the Invention is an invention which could have been easily made by a person skilled in the art based on the Cited Invention, Publicized prior-art, and Well-Known Matter 2.

No. 4 Closing

In light of the above, the appellant should not be granted a patent for the Invention under the provisions of Article 29(2), and the Invention should be rejected without examining other claims.

Therefore, the appeal decision shall be made as described in the conclusion.

July 29, 2019

Chief administrative judge:NAKAKI, TsutomuAdministrative judge:HASEGAWA, AtsuoAdministrative judge:YAMAMOTO, Akihiro