Appeal decision

Appeal No. 2017-933

Taiwan
Appellant High Tech Computer Corporation

Patent Attorney SUGIMURA, Kenji

The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2015-51312, entitled "METHOD FOR CHANGING CONNECTION APPLICABLE TO USER APPARATUS AND BASE STATION" [the application published on Oct. 5, 2015, Japanese Unexamined Patent Application Publication No. 2015-177548] 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 is an application filed on Mar. 13, 2015 (priority claim under the Paris Convention on Mar. 14, 2014 US, Mar. 17, 2014 US, May 9, 2014 US, and Mar. 13, 2015 US, and the history of the procedures thereof is as follows.

As of Feb. 22, 2016 A written notice of reasons for refusal
May 31, 2016 Submission of a written opinion and a written amendment
As of Sep. 20, 2016 Decision of refusal
Jan. 23, 2017 An appeal against an examiner's decision of refusal and submission of a written amendment
As of Jan. 31, 2018 A written notice of reasons for refusal (by the body)
Jun. 5, 2018 Submission of a written opinion and a written amendment

No. 2 Regarding the invention
The inventions according to claims 1-15 of the present application are specified by the matters described in claims 1-15 of the scope of claims amended by the amendment made on Jun. 5, 2018, and the invention according to claim 7 thereof (hereinafter, referred to as "the Invention") is as follows.

"A connection modification method applicable to a first base station supporting user equipment (UE) capable of dually connecting to the first base station and a second base station comprising:
a step of receiving a first SCG configuration to establish a first SCG bearer for the UE from the second base station;
a step of transmitting to the UE a first radio resource control (RRC) message comprising the first SCG configuration;
a step of transmitting to a third base station a first SCG addition request comprising the first SCG configuration for establishing a second SCG bearer for the

UE;

a step of receiving from the third base station a first SCG addition response comprising a second SCG configuration which is based on the first SCG configuration in response to transmitting the first SCG addition request;

a step of transmitting to the second base station a SCG release request to release the first SCG bearer;

a step of receiving, from the second base station, a Packet Data Convergence Protocol (PDCP) service data unit (SDU) of the first SCG bearer, a transmitter hyper frame number (TX_HFN), and a PDCP sequence number (SN), when the PDCP SDU is not successfully transmitted by the second base station and the TX_HFN and PDCP SN are associated with the PDCP SDU;

a step of transmitting to the third base station the PDCP SDU, the TX_HFN, and the PDCP SN in response to receiving from the second base station the PDCP SDU, the TX_HFN, and the PDCP SN; and

a step of transmitting to the UE a second RRC message comprising the second SCG configuration to establish the second SCG bearer."

No. 3 Reasons for refusal

A summary of the reason for refusal notified by the body as of Jan. 31, 2018 (hereinafter, referred to as "The Reasons for Refusal by the Body") is as follows.

The inventions according to the following claims of this application could have been invented with ease by a person having ordinary knowledge in the technical field of the Invention before the filing of the application, based on the invention described in the following publication distributed before the application was filed in Japan or abroad or the invention available to public through electric communication lines, and, therefore, the appellant should not be granted a patent for that in accordance with the provisions of Article 29(2) of the Patent Act. Refer to Cited Document 4 and Cited Document 5 for claim 7.

List of Cited Documents, etc.

4. NSN Nokia Corporation, SeNB change, and inter-MeNB handover procedure, 3GPP TSG-RAN WG3 Meeting #83 R3-140186, published on Jan. 31, 2014, URL:http://www.3gpp.org/ftp/tsg_ran/WG3_Iu/TSGR3_83/Docs/R3-140186.zip

5. NTT DOCOMO, INC., Introduction of Dual Connectivity, 3GPP TSG-RAN WG2 #85 R2-140906, published on Feb. 22, 2014, URL:http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_85/Docs/R2-140906.zip

No. 4 Regarding descriptions of Cited Documents and Cited invention

1. Cited Document 4

In NSN Nokia Corporation "SeNB change and inter-MeNB handover procedure", 3GPP TSG-RAN WG3 Meeting #83 R3-140186, the Internet <http://www.3gpp.org/ftp/tsg_ran/WG3_Iu/TSGR3_83/Docs/R3-140186.zip>, published on Jan. 31, 2014 (hereinafter, referred to as "Cited Document 4") cited in The Reasons for Refusal by the Body, there are the following descriptions together with drawings. (The underlines are given by the body.)

(1) "2. 1 Mobility scenarios
Figure 1 shows the overall architecture in small cell deployment. The definitions are below according to TR36.842.Master Cell Group: the group of the serving cells associated with the MeNB.
Master eNB: in dual connectivity, the eNB which terminates at least S1-MME and therefore act as a mobility anchor towards the CN.
Secondary Cell Group: the group of the serving cells associated with the SeNB.
Secondary eNB: in dual connectivity, an eNB providing additional radio resources for the UE, which is not the Master eNB." (Page 1, lines 8 to 1 from the bottom)

(2) "In this architecture, the following mobility scenarios should be supported. Note that inter-MME and inter-SGW handover cases are not shown.
A) from MeNB#1 and no SeNB to MeNB#1 and SeNB#1 (SeNB addition, Annex G in TR36.842)
B) from MeNB#1 and SeNB#1 to MeNB#1 and no SeNB added (SeNB release, Annex G in TR36.842)
C) from MeNB#1 and SeNB#1 to MeNB#2 and no SeNB added (Inter-MeNB handover)
D) from MeNB#1 and SeNB#1 to MeNB#1 and SeNB#2 (SeNB change)" (Page 2, lines 1 to 6)

(3) "10.1.2.X.Z SeNB change procedure
Figure 10.1.2.X.Z-1 shows SeNB change signalling flow.

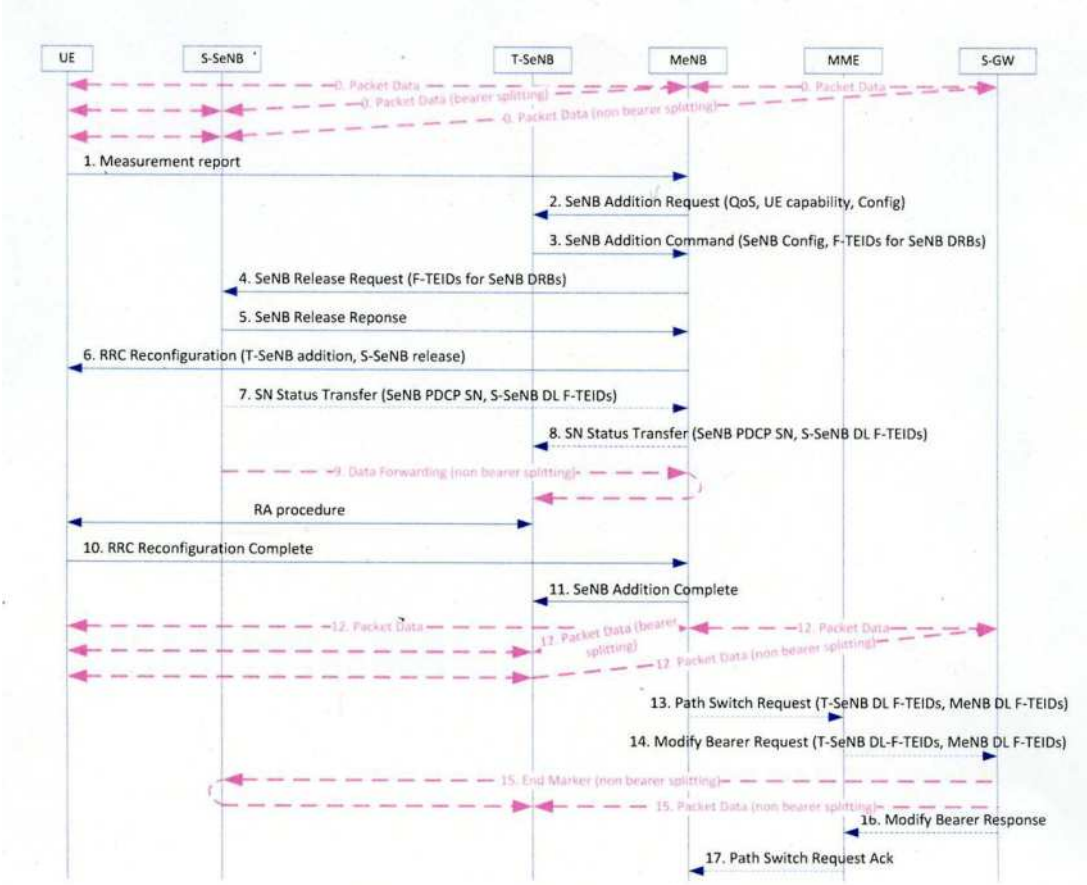

Figure 10.1.2.X.Z-1: SeNB change signalling flow

Below is a more detailed description of SeNB change procedure:
0 Packet data is transferred between S-GW and the UE by passing through MeNB, or S-SeNB depending on the User-Plane option (bearer splitting or non bearer splitting) in dual connectivity mode.
1 A Measurement Report is triggered and sent to the MeNB.
2 The MeNB sends to the T-SeNM (Target SeNB) an SeNB Addition Request message including QoS, UE capability, S-SeNB UL F-TEIDs with S-GW (only for non bearer splitting) and configuration information to the T-SeNB (Target SeNB).
3 T-SeNB responds with SeNB Addition Command message including T-SeNB configuration information, T-SeNB DL F-TEIDs with S-GW (only for non bearer splitting), and F-TEIDs used for T-SeNB receiving forwarded packets from MeNB (only for non bearer splitting).
4 MeNB sends SeNB Release Request message, which includes F-TEIDs (only for non bearer splitting) used for MeNB receiving forwarded packets from S-SeNB, to the S-SeNB.
5 S-SeNB responds with SeNB Release Response message to the MeNB and release the radio resource for the UE.
6 The MeNB generates the RRC message to perform the SeNB change, i.e. RRCConnectionReconfiguration message indicating that T-SeNB is added and S-SeNB

is released, to be sent towards the UE so that the UE can switch the data transmission from S-SeNB to T-SeNB.
7 SeNB may send SN Status Transfer message including the uplink PDCP SN and HFN receiver status and the downlink PDCP SN and HFN transmitter status of S-SeNB to the MeNB. This procedure occurs only for non bearer splitting.
8 MeNB may send SN Status Transfer message including the uplink PDCP SN and HFN receiver status and the downlink PDCP SN and HFN transmitter status of S-SeNB to the T-SeNB. This procedure occurs only for non bearer splitting.
9 S-SeNB may perform data forwarding to MeNB. T-SeNB buffers forwarded packets from the MeNB until it receives SeNB Addition Complete message.
10 After receiving the RRCConnectionReconfiguration message indicating that T-SeNB is added and S-SeNB is released, UE performs a Random Access procedure towards T-SeNB and sends an RRCConnectionReconfigurationComplete message to the MeNB.
11 MeNB sends an SeNB Addition Complete message to the T-SeNB so that T-SeNB can start sending buffered packets to the UE.
12 Packet data is transferred between S-GW and the UE by passing through MeNB, or T-SeNB depending on the User-Plane option (bear splitting or non bearer splitting) in dual connectivity mode. DL packets from S-GW will go through T-SeNB to the UE after S-GW receives a Modify Bearer Request message from MME in step 14 in case of non bearer splitting." (Page 4, line 2 from the bottom to Page 6, line 14)

A The description of "0"-"11" of the above-mentioned (3) is a description of each step indicated in "0"-"11" of Fig. 10.1.2.X.Z-1, and it is obvious that, from the description of step 0 in the above-mentioned (3) and Fig. 10.1.2.X.Z-1, the UE is a UE capable of dually connecting to MeNB and S-SeNB, and thus the MeNB communicates with the UE. Then, the flow illustrated in Fig. 10.1.2.X.Z-1 is a flow of SeNB change to change from connection between UE and S-SeNB to connection between the UE and T-SeNB, and, therefore, it can be said that "a SeNB change method, applicable to MeNB communicating with UE capable of dually connecting to the MeNB and S-SeNB, for changing from connection between the UE and the S-SeNB to connection between the UE and T-SeNB".

B Since in step 0 of the above-mentioned (3), data transfer between the UE and the S-SeNB is performed in addition to data transfer between the UE and the MeNB, it is obvious that, at a time point before step 0, "a step of adding connection between the UE and the S-SeNB" is performed with respect to connection between the UE and the MeNB.

C According to descriptions of the above-mentioned (1), Secondary Cell Group (SCG) is associated with SeNB. In addition, in step 0 in Fig. 10.1.2.X.Z-1, it is described that, in addition to packet data transfer carried out via MeNB between S-GW and UE, a situation in which packet data are transferred via S-SeNB between the S-GW and the UE is a situation not being a situation of bearer splitting, and, therefore, it is obvious that one bearer is being set to perform packet data transfer via MeNB and packet data transfer via the S-SeNB, and this bearer may be called a first SCG bearer. In a similar fashion, it is obvious that, from the statement of step 12 in Fig. 10.1.2.X.Z-1, one bearer is being set to perform packet data transfer via MeNB and packet data

transfer via T-SeNB, and this bearer may be called a second SCG bearer.

Then, since transmission of an SeNB Addition Request message from the MeNB to the T-SeNB in step 2 of the above-mentioned (3) is performed to start packet data transfer between the UE and the T-SeNB in step 12, it is obvious that it is performed to set a bearer between the S-GW and the UE via the T-SeNB.

Therefore, it can be said that step 2 is "a step of transmitting an SeNB Addition Request message including configuration information to the T-SeNB to establish a second SCG bearer for the UE" by MeNB.

D Step 3 of the above (3) is a step in which MeNB receives an SeNB Addition Command message transmitted from the T-SeNB in response to transmission of the SeNB Addition Request message of step 2, and the SeNB Addition Command message includes T-SeNB configuration information.

Therefore, it can be said that step 3 is "a step of receiving from the T-SeNB an SeNB Addition Command message including configuration information related to SCG to be associated with the T-SeNB in response to transmission of the SeNB Addition Request message" by MeNB.

E It is obvious that an SeNB Release Request message to be transmitted in step 4 of the above-mentioned (3) is a message for releasing a line between the UE and the S-SeNB. Therefore, it can be said that step 4 is "a step of transmitting to the S-SeNB an SeNB Release Request message to release a first SCG bearer between the UE and the S-SeNB" by MeNB.

F According to the statement of step 6 of the above (3) and the description of "6. RRC Reconfiguration (T-SeNB addition, S-SeNB release)" in Fig. 10.1.2.X.Z-1 of the above (3), it is obvious that, in step 6, an RRCConnectionReconfiguration message indicating that the T-SeNB is added is transmitted from the MeNB to the UE. Therefore, it can be said that step 6 is "a step of transmitting to the UE an RRCConnectionReconfiguration message indicating that the T-SeNB is added" by MeNB.

G Since, according to the statement of step 7 of the above-mentioned (3), an SN Status Transfer message to be received from S-SeNB by MeNB includes the downlink PDCP SN and HFN transmitter status, it can be said that step 7 is "a step of receiving downlink PDCP SN and HFN transmitter status of the S-SeNB transmitted from the S-SeNB" by MeNB.

H According to Fig. 10.1.2.X.Z-1 of the above (3), the step of transmitting, in step 8, an SN Status Transfer message to T-SeNB is carried out in response to reception, in step 7, of the SN Status Transfer message including the downlink PDCP SN and the HFN transmitter status, and thus it can be said that step 8 is "a step of transmitting, in response to the reception of the PDCP SN and the HFN transmitter status of the S-SeNB, the downlink PDCP SN and the HFN transmitter status of the S-SeNB, to the T-SeNB" by MeNB.

I According to statements of step 9 of the above (3), MeNB receives data transfer

from S-SeNB. In addition, according to Fig. 10.1.2.X.Z-1 of the above (3), the data transferred from S-SeNB to MeNB is transferred from the MeNB to T-SeNB. Accordingly, it can be said that step 9 is "a step of performing data transfer to receive a packet from the S-SeNB and transmit the packet to the T-SeNB" by MeNB.

Summarizing the above matters, it is recognized that, in Cited Document 4, the following invention (hereinafter, referred to as "Cited Invention") is described.

"An SeNB change method, applicable to MeNB communicating with UE capable of dually connecting to the MeNB and S-SeNB, for changing from connection between the UE and the S-SeNB to connection between the UE and T-SeNB, comprising:

a step of adding connection between the UE and the S-SeNB;

a step of transmitting to the T-SeNB an SeNB Addition Request message including configuration information to establish a second SCG bearer for the UE;

a step of receiving from the T-SeNB an SeNB Addition Command message including configuration information related to SCG to be associated with the T-SeNB in response to transmission of the SeNB Addition Request message;

a step of transmitting to the S-SeNB an SeNB Release Request message to release a first SCG bearer between the UE and the S-SeNB;

a step of transmitting to the UE an RRCConnectionReconfiguration message indicating that the T-SeNB is added;

a step of receiving downlink PDCP SN and HFN transmitter status of the S-SeNB transmitted from the S-SeNB;

a step of transmitting to the T-SeNB, in response to the reception of the PDCP SN and the HFN transmitter status of the S-SeNB, the downlink PDCP SN and the HFN transmitter status of the S-SeNB; and

a step of performing data transfer to receive a packet from the S-SeNB and transmit the packet to the T-SeNB."

2. Cited Document 5

In NTT DOCOMO, INC.,"Introduction of Dual Connectivity", 3GPP TSG-RAN WG2 #85 R2-140906, the Internet <http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_85/Docs/R2-140906.zip>, published on Feb. 22, 2014 (Heisei 26) (hereinafter, referred to as "Cited Document 5") cited in The Reasons for Refusal by the Body, there are the following descriptions together with drawings. (The underlines are given by the body)

(1) "10.1.2.3 Data forwarding
10.1.2.3.1 For RLC-AM DRBs
Upon handover, the source eNB may forward in order to the target eNB all downlink PDCP SDUs with their SN that have not been acknowledged by the UE." (Page 23, lines 7 to 4 from the bottom)

(2) "10.1.2.X Dual connectivity operation
10.1.2.X.1 SCG modification

The SCG modification procedure is initiated by the SeNB and used to perform configuration changes of the SCG within the same SeNB. Figure 10.1.2.X.1-1 shows the SCG Modification procedure.
1. The SeNB provides the new radio resource configuration of SCG by the RRC container in the SCG Modification Request message.
2. The MeNB sends the RRCConnectionReconfiguration message to the UE including the new radio resource configuration of SCG according to the SCG Modification Request message.
3. The UE applies the new configuration and reply the RRCConnectionReconfigurationComplete message. If synchronization towards the SeNB is not required for the new configuration, the UE may perform UL transmission after having applied the new configuration. If the new configuration requires synchronization towards the SeNB, the UE performs the Random Access procedure. The IE by which the SeNB triggers the Random Access procedure is FFS.
4. The MeNB replies with the SCG Modification Response to the SeNB forwarding an RRCConnectionReconfigurationComplete message.

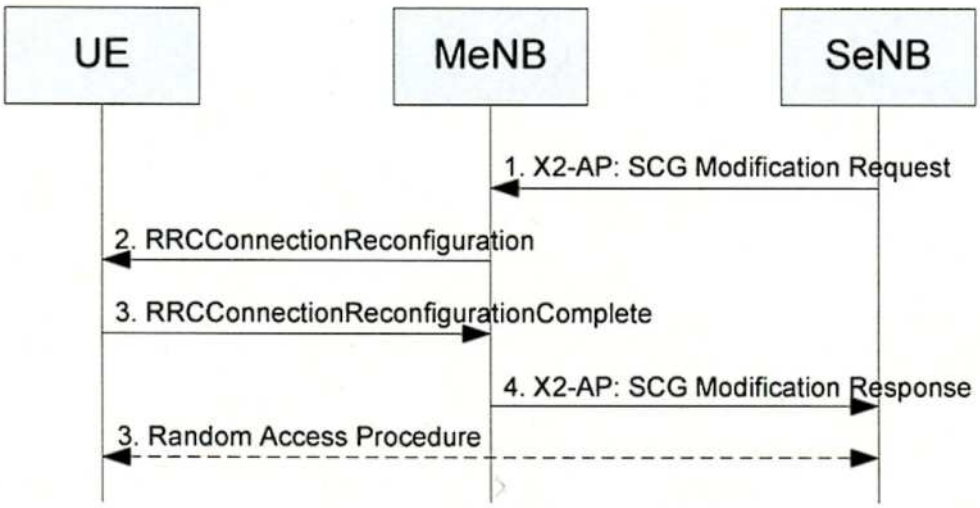

Figure 10.1.2.X.1-1: SCG Modification procedure" (Page 25, line 10 from the bottom to Page 26, line 5)

(3) "10.1.2.X.2 SCG addition/MeNB triggered SCG modification
The SCG addition procedure is initiated by the MeNB and used to add the first cell of the SCG. The MeNB triggered SCG modification procedure is initiated by the MeNB and used as described in subclause 10.1.2.X.1. Figure 10.1.2.X.2-1 shows the SCG Addition/MeNB triggered SCG modification procedure.
1. The MeNB sends the SCG Addition/Modification Indication message including the MCG configuration for UE capability coordination to be used as a basis for the reconfiguration by the SeNB.
2. The SCG Modification procedure is as described in 10.1.2.X.1.

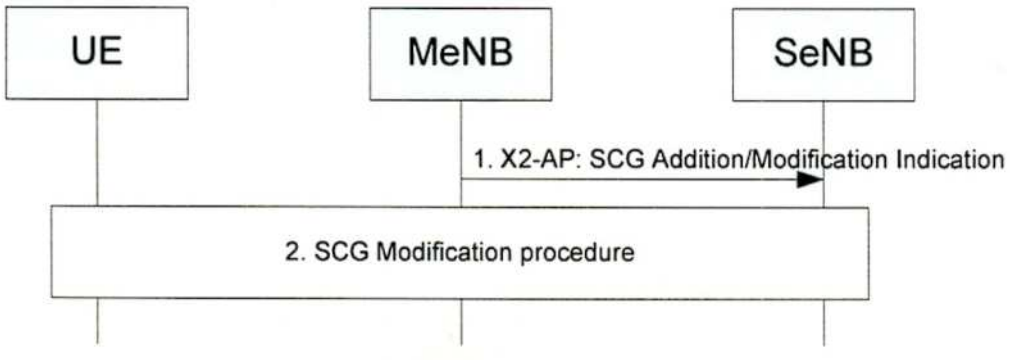

Figure 10.1.2.X.2-1: SCG Addition/MeNB triggered SCG Modification procedure"
(Page 26, lines 12 to 18)

a As a means for data transfer between eNBs on the occasion of switching the eNBs, the means "to transfer data for which acknowledgment has not been made by UE although having been transmitted from the source eNB that is the switching origin and for which transmission is not successful, to the target eNB that is the switching destination as PDCP SDU" is a common means for a person skilled in the art as described in the above-mentioned (1), for example.

b As described at the beginning of the above-mentioned (2) as "10.1.2.X Dual connectivity operation", all the steps described in the above-mentioned (2) and (3) are control on the premise of dual connectivity. Since "the new radio resource configuration of SCG" in step 1 and step 2 of the above-mentioned (2) is a new configuration to be applied when performing data communication between the UE and the SeNB in step 3, it can be said to be an SCG configuration to be used for establishing connection between UE and SCG. In addition, it is obvious that an RRCConnectionReconfiguration message is an RRC message.

Then, it is described that the SCG Modification procedure described in 10.1.2.X.1 as step 2 is performed on the occasion of the SCG addition procedure of the above (3), and MeNB receives an SCG Modification Request message including "the new radio resource configuration of SCG" from SeNB in step 1 of Fig. 10.1.2.X.1-1 of the above (2), and the MeNB transmits the RRCConnectionReconfiguration message to the UE in step 2 of the above-mentioned (2).

Therefore, it is recognized that, Cited Document 5 describes a publicly known art, "as a specific means of a procedure to add a cell of SCG in dual connectivity, MeNB receives SCG configuration of a cell of SCG from SeNB, and transmits to UE an RRC message including the SCG configuration of the cell of the SCG".

No. 5 Comparison and judgment

The Invention and the Cited Invention are compared.

1. Since "SeNB change method" of Cited Invention is a method to change connection between UE and S-SeNB to connection between the UE and T-SeNB, it can be said that it is a "connection modification method". "UE" of Cited Invention corresponds to "user equipment (UE)" of the Invention.

In addition, in the Invention, "the second base station" is a base station having been connected to user equipment before an SCG bearer is cancelled by an SCG release request on the occasion of a connection change, and "the third base station" is a base station that is connected to the user equipment after establishment of an SCG bearer by the first SCG addition request on the occasion of a connection change. Then, "S-SeNB" of Cited Invention is a base station that has been connected to UE before change in a connection change, and "T-SeNB" is a base station to be connected to the UE after change. Therefore, "S-SeNB" and "T-SeNB" correspond to "the second base station" and "the third base station" of the Invention, respectively. Since it is obvious that "MeNB" of Cited Invention supports UE by communicating with the UE, it can be said that "MeNB" is a base station "supporting UE". In addition, "MeNB" is a base station dually connecting to S-SeNB and T-SeNB. From these, "MeNB" corresponds to "first base station supporting a user equipment (UE)" of the Invention.

Accordingly, it can be said that "an SeNB change method, applicable to MeNB communicating with UE capable of dually connecting to the MeNB and S-SeNB, for changing from connection between the UE and the S-SeNB to connection between the UE and T-SeNB" of Cited Invention is "a connection modification method applicable to a first base station supporting user equipment (UE) capable of dually connecting to the first base station and a second base station".

2. Since "a step of receiving a first SCG configuration to establish a first SCG bearer for the UE from the second base station" and "a step of transmitting to the UE a first radio resource control (RRC) message comprising the first SCG configuration" of the Invention are steps to be performed when connection between the UE and the second base station is added in the state that communication is being performed between the UE and the first base station, these can be said to be "a step of adding connection between the UE and the second base station".

Therefore, "a step of receiving from the second base station a first SCG configuration to establish a first SCG bearer for the UE" and "a step of transmitting to the UE a first radio resource control (RRC) message comprising the first SCG configuration" of the Invention and "a step of adding connection between the UE and the S-SeNB" of Cited Invention are common in a point that both can be said to be "a step of adding connection between the UE and the second base station".

3. Since "configuration information" included in an SeNB Addition Request message of Cited Invention is information that indicates configuration, it can be said to be "the first configuration" of the Invention. In addition, the "SeNB Addition Request message" of Cited Invention corresponds to "the first SCG addition request" of the Invention.

Therefore, "a step of transmitting an SeNB Addition Request message including configuration information to the T-SeNB to establish a second SCG bearer for the UE" of Cited Invention is identical with that of the Invention in a point of being "a step of transmitting a first SCG addition request having the first configuration to a third base station to establish a second SCG bearer for the UE".

4. Since "configuration information related to SCG to be associated with T-SeNB" of Cited Invention is information included in an SeNB Addition Command message to be received in response to transmitting the SeNB Addition Request message, and is

information indicating the configuration of the SCG, it corresponds to "second SCG configuration" of the Invention. In addition, "SeNB Addition Command message" of Cited Invention corresponds to "the first SCG addition response" of the Invention.

Accordingly, "a step of receiving from the T-SeNB an SeNB Addition Command message including configuration information related to SCG to be associated with the T-SeNB in response to transmission of the SeNB Addition Request message" of Cited Invention corresponds to "a step of receiving from the third base station a first SCG addition response comprising a second SCG configuration in response to transmitting the first SCG addition request" of the Invention.

5. "SeNB Release Request message" of Cited Invention corresponds to "SCG release request" of the Invention.

Therefore, "a step of transmitting to the S-SeNB an SeNB Release Request message to release a first SCG bearer between the UE and the S-SeNB" of Cited Invention corresponds to "transmitting an SCG release request to release the first SCG bearer, to the second base station" of the Invention.

6. Since, in Cited Invention, "the downlink PDCP SN and HFN transmitter status of the S-SeNB" that are received from the S-SeNB and transmitted to the T-SeNB are "PDCP SN" and "HFN" related to the transmission (TX) from the S-SeNB, these correspond to "PDCP SN" and "TX_HFN" of the Invention.

Accordingly, "a step of receiving downlink PDCP SN and HFN transmitter status of the S-SeNB transmitted from the S-SeNB" of Cited Invention is identical with that of the Invention in a point of comprising "receiving TX_HFN and PDCP SN transmitted from the second base station".

Similarly, "a step of transmitting to the T-SeNB, in response to the reception of the PDCP SN and the HFN transmitter status of the S-SeNB, the downlink PDCP SN and the HFN transmitter status of the S-SeNB" of Cited Invention is identical with that of the Invention in a point comprising "transmitting to the third base station the TX_HFN and the PDCP SN in response to receiving the TX_HFN and the PDCP SN from the second base station".

7. In "a step of performing data transfer to receive a packet from the S-SeNB and transmit the packet to the T-SeNB" of Cited Invention, it is not specified that the packet is a PDCP SDU. However, the step is identical with that of the Invention in a point of comprising "a step of receiving a packet transmitted from the second base station" and "a step of transmitting the packet to the third base station in response to receiving the packet from the second base station".

8. The matter that "T-SeNB is added" in Cited Invention means establishing a second SCG bearer between UE and T-SeNB, and, therefore, corresponds to "establishing a second SCG bearer" in the Invention. In addition, it is obvious that an RRCConnectionReconfiguration message is an RRC message, and, therefore, it corresponds to "a second RRC message to establish the second SCG bearer" of the Invention.

Therefore, "a step of transmitting an RRCConnectionReconfiguration message indicating that the T-SeNB is added, to the UE" in Cited Invention identical

with the Invention in a point of "a step of transmitting to the UE a second RRC message to establish the second SCG bearer".

From the above, the corresponding features and the different features between the Invention and Cited Invention are as follows.

(Corresponding features)
"A connection modification method applicable to a first base station supporting user equipment (UE) capable of dually connecting to the first base station and a second base station comprising:

a step of adding connection between the UE and the second base station;

a step of transmitting a first SCG addition request having the first configuration to a third base station to establish a second SCG bearer for the UE;

a step of receiving from the third base station a first SCG addition response comprising a second SCG configuration in response to transmitting the first SCG addition request;

a step of transmitting to the second base station an SCG release request to release the first SCG bearer;

a step of receiving TX_HFN and PDCP SN transmitted from the second base station;

a step of transmitting to the third base station the TX_HFN and the PDCP SN in response to receiving the TX_HFN and the PDCP SN from the second base station;

a step of receiving a packet transmitted from the second base station; and

a step of transmitting the packet to the third base station in response to receiving the packet from the second base station, and further comprising

a step of transmitting to the UE a second RRC message to establish the second SCG bearer."

(Different feature 1)

A point that, concerning "a step of adding connection between the UE and the S-SeNB" of the corresponding feature, the Invention comprises "a step of receiving a first SCG configuration to establish a first SCG bearer for the UE from the second base station" and "a step of transmitting to the UE a first radio resource control (RRC) message comprising the first SCG configuration", whereas, Cited Invention does not comprise the matter specifying the invention in question as a specific means of the step of adding connection between the UE and the S-SeNB.

(Different feature 2)

A point that, concerning "transmitting to a third base station a first SCG addition request having the first configuration" and "receiving from the third base station a first SCG addition response comprising a second SCG configuration" of the corresponding feature, "the first configuration" is "the first SCG configuration" to be used for establishing the first SCG bearer, and "the second SCG configuration" "is based on the first SCG configuration" in the Invention, whereas, Cited Invention does not comprise such matter specifying the invention.

(Different feature 3)

A point that, regarding "a step of receiving TX_HFN and PDCP SN transmitted from the second base station" of the corresponding feature, the Invention performs the receiving "when the PDCP SDU of the first SCG bearer is not successfully transmitted by the second base station and the TX_HFN and PDCP SN are associated with the PDCP SDU", whereas, in Cited Invention, such matter specifying the invention is not included.

A point that, regarding "a step of receiving a packet transmitted from the second base station" and "a step of transmitting the packet to the third base station in response to receiving the packet from the second base station" of the corresponding feature, a packet to be received from the second base station in the Invention is "the PDCP SDU transmitted by the second base station", whereas, in Cited Invention, such matter specifying the invention is not included.

In addition, a point that, concerning "a step of receiving TX_HFN and PDCP SN transmitted from the second base station; a step of transmitting to the third base station the TX_HFN and the PDCP SN in response to receiving the TX_HFN and the PDCP SN from the second base station; a step of receiving a packet transmitted from the second base station; and a step of transmitting the packet to the third base station in response to receiving the packet from the second base station" of the corresponding feature, the step of transferring the PDCP SDU, the TX_HFN, and the PDCP SN from the second base station to the third base station is "one step" in the Invention, whereas, in Cited Invention, such matter specifying the invention is not included.

(Different feature 4)

A point that, regarding "a step of transmitting to the UE a second RRC message to establish the second SCG bearer" of the corresponding feature, the second RRC message to be transmitted to the UE "comprises the second SCG configuration" in the Invention, whereas, in Cited Invention, such matter specifying the invention is not included.

(Different feature 5)

A point that, regarding "transmitting to the UE a second RRC message to establish the second SCG bearer" of the corresponding feature, anteroposterior relation with other steps have not been made clear in the Invention, whereas, in Cited Invention, it is a step carried out in advance of the step of transferring PDCP SDU, TX_HFN, and PDCP SN.

(Regarding Different feature 1)

As the above 2.b in No. 4, "as a specific means of a procedure to add a cell of SCG in dual connectivity, MeNB receives SCG configuration of a cell of SCG from SeNB, and transmits to UE an RRC message including the SCG configuration of the cell of the SCG" is a publicly known art, and, therefore, as a specific means of the step of adding connection between the UE and the S-SeNB in Cited Invention, it could have been conceived with ease by a person skilled in the art to make it be steps of "receiving from the second base station a first SCG configuration to establish a first SCG bearer for the UE, and transmitting to the UE a first radio resource control (RRC) message comprising the first SCG configuration".

(Regarding Different feature 2)

First, since Cited Invention is a procedure to change SeNB from S-SeNB to T-SeNB, and, it is a usual practice to inform the T-SeNB of information related to communication being carried out in the S-SeNB in order to set T-SeNB properly, it is obvious that the configuration information contained in an SeNB Addition Request message includes configuration information related to the S-SeNB; that is, the first SCG addition request has the first SCG configuration to be used for establishing the first SCG bearer.

Then, since, in Cited Invention, T-SeNB transmits an SeNB Addition Command message in response to an SeNB Addition Request message received from MeNB, it is obvious that parameters to be included in the SeNB Addition Command message in T-SeNB are determined in consideration of parameters included in the SeNB Addition Request message. Therefore, it is also nothing more than a matter that could have been conceived of by a person of ordinary skill in the art that T-SeNB configuration information that is one of parameters to be included in an SeNB Addition Command message is determined based on configuration information related to S-SeNB that is a parameter included in an SeNB Addition Request message.

(Regarding Different feature 3)

As the above 2.a of No. 4, as a means for transferring data between eNBs on the occasion of switching the eNBs, the means "to transfer data for which acknowledgment has not been made by UE although having been transmitted from the source eNB that is the switching origin and transmission is not successful, to the target eNB that is the switching destination as PDCP SDU" is a usual practice for a person skilled in the art.

Therefore, it is not particularly difficult for a person skilled in the art to make Cited Invention have the constitution in which, at the time of transferring data between SeNBs via MeNB on the occasion of SeNB switching from S-SeNB to T-SeNB, there is transferred a PDCP SDU for which Acknowledgment has not been made although it has been transmitted from S-SeNB of the switching origin and thus transmission has not been successful.

In addition, it is also nothing more than a matter that could have been conceived of by a person skilled in the art with ease to make Cited Invention, in which PDCP SN and HFN are transferred as one step, have the constitution in which transfer of, not only PDCP SN and HFN, but also PDCP SDU are performed as one step at the time of transferring data that is the PDCP SDU between SeNBs via MeNB on the occasion of SeNB switching from S-SeNB to T-SeNB.

(Regarding Different feature 4)

As the above 2.b of NO 4, the matter that "as a specific means of a procedure to add a cell of SCG in dual connectivity ... transmits to the UE an RRC message including the SCG configuration of the cell of the SCG" is a matter of publicly known art.

Also regarding the step of transmitting to the UE an RRCConnectionReconfiguration message indicating that the T-SeNB is added in Cited Invention, it would have been easily conceived of by a person skilled in the art to make it be of a configuration in which an RRCConnectionReconfiguration message has an

SCG configuration related to SCG to be associated with T-SeNB to be added; that is, to be of a constitution in which a second RRC message has the second SCG configuration.

(Regarding Different feature 5)

Different feature 5 is not a substantive different feature, because the Invention is an invention for which it is only prescribed that the Invention comprises each step, and temporal relationships between respective steps are not specified.

Meanwhile, even if the above-mentioned order is specified in the scope of claims in consideration of the description of the example, "a step of receiving downlink PDCP SN and HFN transmitter status of the S-SeNB transmitted from the S-SeNB", "a step of transmitting to the T-SeNB, in response to the reception of the PDCP SN and the HFN transmitter status of the S-SeNB, the downlink PDCP SN and the HFN transmitter status of the S-SeNB" and "a step of performing data transfer to receive a packet from the S-SeNB and transmit the packet to the T-SeNB" in Cited Invention are control in which the UE is not involved, and, therefore, it is obvious that these are independent control from "a step of transmitting to the UE an RRCConnectionReconfiguration message indicating that the T-SeNB is added" in which UE is involved, and that the former steps and the latter step do not have influence on each other. Which control should be performed earlier on that occasion is nothing but a design matter that should be determined arbitrarily by a person skilled in the art.

Therefore, the Invention is an invention that would have been invented by a person skilled in the art with ease based on Cited Invention, the publicized prior art, and the well-known art.

No. 6 Closing

As above, since the appellant should not be granted a patent for the Invention in accordance with the provisions of Article 29(2) of the Patent Act, the application should be rejected without examining the inventions according to the other claims.

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

Oct. 16, 2018

Chief administrative judge: NAKAKI, Tsutomu
Administrative judge: KURAMOTO, Atsushi
Administrative judge: SUGAHARA, Michiharu