

**We claim:**

1. A mobile communication system comprising:  
a terminal (UE (User Equipment)) that performs handover  
5 procedure from an LTE (Long Term Evolution) wireless area to a 3G  
wireless area or a 2G wireless area; and  
an MME (Mobility Management Entity) that discards, if the  
handover procedure is ongoing when the MME receives a paging request  
message for the terminal over an SGs interface, the paging request  
10 message and no further action is performed by the MME in response to  
the reception of the paging request message.

2. An MME (Mobility Management Entity) used in a mobile  
communication system, wherein  
15 if handover procedure from an LTE wireless area to a 3G  
wireless area or a 2G wireless area is ongoing when the MME receives a  
paging request message for the terminal (UE) over an SGs interface, the  
MME discards the paging request message and no further action is  
performed by the MME in response to the reception of the paging  
20 request message.

3. An incoming call control method in a mobile communication  
system, comprising:

performing, by a terminal (UE), handover procedure processing  
25 from an LTE wireless area to a 3G wireless area or a 2G wireless area;  
and

discarding, by an MME (Mobility Management Entity), if the  
handover procedure is ongoing when the MME receives a paging request  
message for the terminal over an SGs interface, the paging request  
30 message and no further action is performed by the MME in response to  
the reception of the paging request message

4. An incoming call control method by an MME (Mobility Management Entity) used in a mobile communication system, comprising:

discarding, if handover procedure from an LTE wireless area to a 3G wireless area or a 2G wireless area is ongoing when the MME receives a paging request message for the terminal (UE) over an SGs interface, the paging request message and no further action is performed by the MME in response to the reception of the paging request message.

5. A control method of a terminal (UE) used in a mobile communication system, comprising:

performing, by the terminal, handover procedure processing from an LTE wireless area to a 3G wireless area or a 2G wireless area; and

discarding, by an MME (Mobility Management Entity), if the handover procedure is ongoing when the MME receives a paging request message for the terminal over an SGs interface, the paging request message and no further action is performed by the MME in response to the reception of the paging request message.

6. The mobile communication system according to Claim 1, wherein

the MME does not perform further incoming call processing to the terminal after discarding the paging request message and, when receiving retransmission of the paging request message from a switching device (MSC/VLR (Mobile Switching Center/Visitor Location Register)), continues the incoming call processing.

7. The mobile communication system according to Claim 6, wherein

the switching device performs retransmission of the paging request message by starting a timer.

8. The MME according to Claim 2, wherein

the MME does not perform further incoming call processing to the terminal after discarding the paging request message and, when receiving retransmission of the paging request message from a switching device (MSC/VLR (Mobile Switching Center/Visitor Location Register)), continues the incoming call processing.

9. The MME according to Claim 8, wherein the switching device performs retransmission of the paging request message by starting a timer.

10. The incoming call control method in the mobile communication system according to Claim 3, wherein the MME does not perform further incoming call processing to the terminal after discarding the paging request message and, when receiving retransmission of the paging request message from a switching device (MSC/VLR (Mobile Switching Center/Visitor Location Register)), continues the incoming call processing.

11. The incoming call control method in the mobile communication system according to Claim 10, wherein the switching device performs retransmission of the paging request message by starting a timer.

12. The incoming call control method by the MME according to Claim 4, wherein the MME does not perform further incoming call processing to the terminal after discarding the paging request message and, when receiving retransmission of the paging request message from a switching device (MSC/VLR (Mobile Switching Center/Visitor Location Register)), continues the incoming call processing.

13. The incoming call control method by the MME according to Claim 12, wherein

the switching device performs retransmission of the paging request message by starting a timer.

14. A terminal (UE (User Equipment)) used in a mobile communication system, comprising:

means for performing handover procedure from an LTE (Long Term Evolution) wireless area to a 3G wireless area or a 2G wireless area; and

means for receiving, if the handover procedure is ongoing when an MME receives a paging request message over an SGs interface, and hence the MME discards the paging request message and performs no further action, the paging request message retransmitted by an MSC/VLR (Mobile Switching Center/ Visitor Location Register).

15. A terminal (UE (User Equipment)) used in a mobile communication system, comprising:

means for performing handover procedure from an LTE (Long Term Evolution) wireless area to a 3G wireless area or a 2G wireless area; and

means for receiving, if an MME discards a paging request message for the terminal and thereby performs no further action in response to the reception of the paging request message because the handover procedure is ongoing when the MME receives the paging request message over an SGs interface, the paging request message retransmitted by an MSC/VLR (Mobile Switching Center/ Visitor Location Register).

16. A communication method performed by a terminal (UE (User Equipment)) used in a mobile communication system, comprising:

performing handover procedure from an LTE (Long Term Evolution) wireless area to a 3G wireless area or a 2G wireless area; and

receiving, if the handover procedure is ongoing when an MME

receives a paging request message over an SGs interface, and hence the MME discards the paging request message and performs no further action, the paging request message retransmitted by an MSC/VLR (Mobile Switching Center/ Visitor Location Register).

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17. A communication method performed by a terminal (UE (User Equipment)) used in a mobile communication system, comprising:

performing handover procedure from an LTE (Long Term Evolution) wireless area to a 3G wireless area or a 2G wireless area;  
10 and

receiving, if an MME discards a paging request message for the terminal and thereby performs no further action in response to the reception of the paging request message because the handover procedure is ongoing when the MME receives the paging request message over an  
15 SGs interface, the paging request message retransmitted by an MSC/VLR (Mobile Switching Center/ Visitor Location Register).

18. The terminal according to Claim 14 or 15, wherein

the MME does not perform further incoming call processing to  
20 the terminal after discarding the paging request message and, when receiving retransmission of the paging request message from the MSC/VLR, continues the incoming call processing.

19. The terminal according to Claim 18, wherein

25 the MSC/VLR performs retransmission of the paging request message by starting a timer.

20. The communication method by a terminal according to Claim 16 or 17, wherein

30 the MME does not perform further incoming call processing to the terminal after discarding the paging request message and, when receiving retransmission of the paging request message from the MSC/VLR, continues the incoming call processing.

21. The communication method by a terminal according to Claim 20, wherein

the MSC/VLR performs retransmission of the paging request message by starting a timer.

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