

## WHAT IS CLAIMED IS:

1. A triggering retaining method, applied to user equipment, the trigger retaining method comprising:

generating a media access control protocol data unit (MAC PDU) according to received uplink resource allocation indication information (UL grant) for a first service;

~~and~~

~~retaining,~~ in response to receiving a UL grant for a second service after receiving the UL grant for the first service, wherein an uplink transmission opportunity for the UL grant for the second service precedes an uplink transmission opportunity for the UL grant for the first service and determining that the MAC PDU comprises a buffer status report (BSR)–or–in response to determining that the MAC PDU comprises all data to be transmitted but does not comprise a BSR, retaining triggering of ~~the~~ a BSR and/or a scheduling request (SR) within a first predetermined duration; and

cancelling the BSR and/or the SR, for which the triggering is retained, after the first predetermined duration,

wherein the first predetermined duration is from a timing at which it is determined that the MAC PDU comprises the BSR to an uplink transmission timing corresponding to the UL grant for the first service.

2. The triggering retaining method according to claim 1, wherein the uplink resource allocation indication information is for ~~a~~ the first service, and retaining the triggering of the BSR and/or the SR within the first predetermined duration comprises:

retaining triggering of ~~a~~ the BSR and/or ~~a~~ the SR for ~~a~~ the second service within the first predetermined duration.

3. The triggering retaining method according to claim 2, wherein retaining the triggering of the BSR and/or the SR within the first predetermined duration further comprises:

determining, before retaining triggering of the BSR and/or the SR for the second service

within the first predetermined duration, whether the second service satisfies a predetermined condition,

in response to the second service satisfies the predetermined condition, retaining the triggering of the BSR and/or the SR for the second service within the first predetermined duration;

wherein the predetermined condition is that a time parameter correlated to a required delay of the second service is less than an uplink shared channel (ULSCH) duration corresponding to the uplink resource allocation indication information for the first service or is less than a second predetermined duration corresponding to the uplink resource allocation indication information for the first service or is prior to an uplink transmission timing corresponding to the uplink resource allocation indication information for the first service, the second predetermined duration being a duration between a timing at which the user equipment receives the uplink resource allocation indication information for the first service and the uplink transmission timing corresponding to the uplink resource allocation indication information for the first service.

4. The triggering retaining method according to claim 3, wherein the time parameter is a maximum ULSCH duration in a priority limit parameter of a logical channel for the second service, and the predetermined condition is that the time parameter is less than the ULSCH duration corresponding to the uplink resource allocation indication information for the first service.

5. The triggering retaining method according to claim 4, wherein in response to that the priority limit parameter comprises no maximum ULSCH duration, a maximum ULSCH duration allowed by the user equipment is taken as the maximum ULSCH duration in the priority limit parameter.

6. The triggering retaining method according to claim 3, wherein the time parameter is a transmission cycle of an SR configured for a logical channel for the second service, and the

predetermined condition is that the time parameter is less than the second predetermined duration corresponding to the uplink resource allocation indication information for the first service.

7. The triggering retaining method according to claim 3, wherein the time parameter is a third predetermined duration, and the predetermined condition is that the time parameter is less than the second predetermined duration corresponding to the uplink resource allocation indication information for the first service, wherein the third predetermined duration is configured by a base station for the user equipment in advance, or, the SR is triggered in response to there is no UL-SCH available for BSR transmission within the third predetermined duration starting from a timing at which the BSR corresponding to the first service is triggered.

8. The triggering retaining method according to claim 3, wherein the time parameter is a maximum second predetermined duration configured for a logical channel for the second service, and the predetermined condition is that the time parameter is less than the second predetermined duration corresponding to the uplink resource allocation indication information for the first service.

9. The triggering retaining method according to claim 3, wherein the time parameter is an uplink transmission timing latest configured for a SR for a logical channel for triggering of a BSR after a logical channel for the second service triggers the BSR, and the predetermined condition is that the time parameter is prior to the uplink transmission timing corresponding to the uplink resource allocation indication information for the first service.

~~10. The triggering retaining method according to any one of claims 2 to 9, wherein the first predetermined duration is from a timing, at which it is determined that the MAC PDU comprises the BSR or it is determined that the MAC PDU does not comprise any BSR but comprises all data to be transmitted, to the uplink transmission timing corresponding to the~~

uplink resource allocation indication information for the first service.

~~11. The triggering retaining method according to any one of claims 2 to 9, wherein the first predetermined duration is from a timing at which it is determined that the MAC PDU comprises the BSR or it is determined that the MAC PDU does not comprise any BSR but comprises all data to be transmitted, to a target timing preceding the uplink transmission timing corresponding to the uplink resource allocation indication information for the first service by a fourth predetermined duration,~~

~~wherein the fourth predetermined duration is from an end timing of a physical downlink control channel (PDCCH) for the user equipment to receive the uplink resource allocation indication information for the first service to a first uplink transmission timing supportable by the user equipment after the end timing.~~

~~12. The triggering retaining method according to any one of claims 1 to 9, further comprising:~~

~~canceled the BSR and/or the SR for which triggering is retained after the first predetermined duration.~~

~~13~~10. A triggering retaining apparatus, applied to user equipment, the triggering retaining apparatus comprising:

a generation module, configured to generate a media access control protocol data unit (MAC PDU) according to received uplink resource allocation indication information (UL grant) for a first service; and

a retaining module, configured to, in response to receiving a UL grant for a second service after receiving the UL grant for the first service, wherein an uplink transmission opportunity for the UL grant for the second service precedes an uplink transmission opportunity for the UL grant for the first service and determining that the MAC PDU comprises a buffer status report (BSR) ~~or in response to determining that the MAC PDU comprises all data to be transmitted but does not comprise a BSR~~, retain triggering of the a

BSR and/or a scheduling request (SR) within a first predetermined duration; and  
a cancellation module, configured to cancel the BSR and/or the SR, for which the  
triggering is retained, after the first predetermined duration,  
wherein the first predetermined duration is from a timing at which it is determined that  
the MAC PDU comprises the BSR to an uplink transmission timing corresponding to the UL  
grant for the first service.

1411. The triggering retaining apparatus according to claim 1310, wherein the uplink resource allocation indication information is for ~~a~~the first service, and the retaining module comprises:

a retaining sub-module, configured to retain triggering of ~~a~~the BSR and/or ~~a~~the SR for ~~a~~the second service within the first predetermined duration.

1512. The triggering retaining apparatus according to claim 1411, wherein the retaining module further comprises:

a determination sub-module, configured to determine, before retaining triggering of the BSR and/or the SR for the second service within the first predetermined duration, whether the second service satisfies a predetermined condition,

wherein in response to the second service satisfies the predetermined condition, the retaining sub-module is configured to retain triggering of the BSR and/or the SR for the second service within the first predetermined duration; and

the predetermined condition is that a time parameter correlated to a required delay of the second service is less than an uplink shared channel (ULSCH) duration corresponding to the uplink resource allocation indication information for the first service or is less than a second predetermined duration corresponding to the uplink resource allocation indication information for the first service or is prior to an uplink transmission timing corresponding to the uplink resource allocation indication information for the first service, and the second predetermined duration is a duration between a timing at which the user equipment receives the uplink resource allocation indication information for the first service and the uplink

transmission timing corresponding to the uplink resource allocation indication information for the first service.

~~14~~13. The triggering retaining apparatus according to claim ~~15~~12, wherein the time parameter is a maximum ULSCH duration in a priority limit parameter of a logical channel for the second service, and the predetermined condition is that the time parameter is less than the ULSCH duration corresponding to the uplink resource allocation indication information for the first service.

~~17~~14. The triggering retaining apparatus according to claim ~~16~~13, wherein in response to that the priority limit parameter comprises no maximum ULSCH duration, a maximum ULSCH duration allowed by the user equipment is taken as the maximum ULSCH duration in the priority limit parameter.

~~18~~15. The triggering retaining apparatus according to claim ~~15~~12, wherein the time parameter is a transmission cycle of an SR configured for a logical channel for the second service, and the predetermined condition is that the time parameter is less than the second predetermined duration corresponding to the uplink resource allocation indication information for the first service.

~~19~~16. The triggering retaining apparatus according to claim ~~15~~12, wherein the time parameter is a third predetermined duration, and the predetermined condition is that the time parameter is less than the second predetermined duration corresponding to the uplink resource allocation indication information for the first service, wherein the third predetermined duration is configured by ~~the~~a base station for the user equipment in advance, or, the SR is triggered in response to there is no ULSCH available for BSR transmission within the third predetermined duration starting from a timing at which the BSR corresponding to the first service is triggered.

~~20~~17. The triggering retaining apparatus according to claim ~~15~~12, wherein the time parameter is a maximum second predetermined duration configured for a logical channel for the second service, and the predetermined condition is that the time parameter is less than the second predetermined duration corresponding to the uplink resource allocation indication information for the first service.

~~21~~18. The triggering retaining apparatus according to claim ~~15~~12, wherein the time parameter is an uplink transmission timing latest configured for a SR for a logical channel for triggering of a BSR after a logical channel for the second service triggers the BSR, and the predetermined condition is that the time parameter is prior to the uplink transmission timing corresponding to the uplink resource allocation indication information for the first service.

~~22. The triggering retaining apparatus according to any one of claims 14 to 21, wherein the first predetermined duration is from a timing at which it is determined that the MAC PDU comprises a BSR or it is determined that the MAC PDU does not comprise any BSR but comprises all data to be transmitted to the uplink transmission timing corresponding to the uplink resource allocation indication information for the first service.~~

~~23. The triggering retaining apparatus according to any one of claims 14 to 21, wherein the first predetermined duration is from a timing at which it is determined that the MAC PDU comprises the BSR or it is determined that the MAC PDU does not comprise any BSR but comprises all data to be transmitted to a target time preceding the uplink transmission timing corresponding to the uplink resource allocation indication information for the first service by a fourth predetermined duration,~~

~~wherein the fourth predetermined duration is from an end timing of a physical downlink control channel (PDCCH) for the user equipment to receive the uplink resource allocation indication information for the first service to a first uplink transmission timing supportable by the user equipment after the end timing.~~

~~24. The triggering retaining apparatus according to any one of claims 13 to 21, further comprising:~~

~~a cancellation module, configured to cancel the BSR and/or the SR for which triggering is retained after the first predetermined duration.~~

~~25~~19. An electronic device, comprising:

a processor; and

a memory configured to store instructions executable by the processor,

wherein the processor is configured to perform the triggering retaining method according to any one of claims 1 to ~~12~~9.

~~26~~20. A computer-readable storage medium, have stored a computer program that, when executed by a processor, implements the triggering retaining method according to any one of claims 1 to ~~12~~9.