

WHAT IS CLAIMED IS:

11. A Hybrid Automatic Repeat reQuest (HARQ) feedback method, ~~applicable to~~performed by a base station that allocates, to a terminal, multiple available scheduling resources configured to provide Early Data Transmission (EDT) service, characterized by the method comprising:

performing (110) blind detection on EDT data transmitted to the base station by the terminal on respective available scheduling resources;

determining (120) a HARQ feedback time point for the blind detection according to a preset rule; and

sending (130) HARQ information about the blind detection to the terminal at the HARQ feedback time point;

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;

performing (110) blind detection on the EDT data transmitted to the base station by the terminal on respective available scheduling resources comprises:

determining (310) UL transmission ending time points for respective available scheduling resources based on the TBS and the UL transmission repetition count in respective available scheduling resources, and

performing (320) blind detection on the EDT data at respective UL transmission ending time points,

wherein the preset rule is that a HARQ feedback is made based on a maximum UL transmission repetition count;

determining the HARQ feedback time point for the blind detection according to the preset rule comprises:

determining (410) the maximum UL transmission repetition count according to the UL transmission repetition count in a respective available scheduling resource;

determining (420) a UL transmission ending time point corresponding to the maximum UL transmission repetition count based on a respective UL transmission ending time point;

and

determining (430) the HARQ feedback time point based on the UL transmission ending time point corresponding to the maximum UL transmission repetition count, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point corresponding to the maximum UL transmission repetition count.

~~2. The method of claim 1, wherein the EDT data is uplink (UL) data transmitted by the terminal in a random access process and is in a message 3 in the random access process.~~

~~3. The method of claim 1, wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count; and~~

~~performing blind detection on the EDT data transmitted to the base station by the terminal on respective available scheduling resources comprises:~~

~~determining UL transmission ending time points for respective available scheduling resources based on the TBS and the UL transmission repetition count in respective available scheduling resources; and~~

~~performing blind detection on the EDT data at respective UL transmission ending time points.~~

~~4. The method of claim 3, wherein the preset rule is that a HARQ feedback is made based on a maximum UL transmission repetition count; and~~

~~determining the HARQ feedback time point for the blind detection according to the preset rule comprises:~~

~~determining the maximum UL transmission repetition count according to the UL transmission repetition count in a respective available scheduling resource;~~

~~determining a UL transmission ending time point corresponding to the maximum UL transmission repetition count based on a respective UL transmission ending time point; and~~

~~determining the HARQ feedback time point based on the UL transmission ending time point corresponding to the maximum UL transmission repetition count, where the~~

determined HARQ feedback time point is at a specified position after the UL transmission ending time point corresponding to the maximum UL transmission repetition count.

5. The method of claim 4, wherein the HARQ information about the blind detection comprises first information indicating successful demodulation or second information indicating unsuccessful demodulation; and

 sending the HARQ information about the blind detection to the terminal at the HARQ feedback time point comprises:

 sending the first information to the terminal at the HARQ feedback time point in response to determining that each blind detection result at each UL transmission ending time point comprises successful demodulation; and

 sending the second information to the terminal at the HARQ feedback time point in response to determining that each blind detection result does not comprise successful demodulation.

6. The method of claim 3, wherein the preset rule is that a HARQ feedback is made for each UL transmission ending time point respectively for each available scheduling resource; and

 determining the HARQ feedback time point for the blind detection according to the preset rule comprises:

 determining a HARQ feedback time point corresponding to any UL transmission ending time point, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.

7. The method of claim 6, wherein the HARQ information about the blind detection comprises first information indicating successful demodulation or second information indicating unsuccessful demodulation; and

 sending the HARQ information about the blind detection to the terminal at the HARQ feedback time point comprises:

 in response to determining that a blind detection result at any UL transmission

~~ending time point is successful demodulation, sending the first information to the terminal at the HARQ feedback time point corresponding to the UL transmission ending time point; and~~
~~in response to determining that the blind detection result is unsuccessful demodulation, sending the second information to the terminal at the HARQ feedback time point corresponding to the UL transmission ending time point.~~

8. The method of claim 3, wherein the preset rule is that a HARQ feedback is made only when a blind detection result is successful demodulation; and

~~determining the HARQ feedback time point for the blind detection according to the preset rule comprises:~~

~~determining a HARQ feedback time point corresponding to any UL transmission ending time point, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.~~

9. The method of claim 8, wherein the HARQ information about the blind detection comprises the first information indicating successful demodulation; and

~~sending the HARQ information about the blind detection to the terminal at the HARQ feedback time point comprises:~~

~~in response to determining that a blind detection result at any UL transmission ending time point is successful demodulation, sending the first information to the terminal at the HARQ feedback time point corresponding to the UL transmission ending time point; and~~

~~in response to determining that the blind detection result is unsuccessful demodulation, not performing HARQ feedback at the HARQ feedback time point corresponding to the UL transmission ending time point.~~

10. The method of claim 4 or 6 or 8, wherein the specified position is configured by the base station and is in a UL grant in a Random Access Response (RAR) sent to the terminal by the base station; or

~~the preset rule comprises third information indicating the specified position, and the~~

~~third information indicates a relative relationship between a HARQ feedback time point and a determined UL transmission ending time point.~~

~~442. A Hybrid Automatic Repeat reQuest (HARQ) feedback method, applicable to performed by a terminal, a base station allocating to the terminal multiple available scheduling resources configured to provide Early Data Transmission (EDT) service, characterized by the method comprising:~~

~~selecting (710) an available scheduling resource from the multiple available scheduling resources, wherein the multiple available scheduling resources are allocated by a base station to the terminal and are configured to provide Early Data Transmission (EDT) service;~~

~~sending (710) EDT data to the base station on the selected available scheduling resource;~~

~~determining (720) a HARQ feedback time point for the EDT data according to a preset rule; and~~

~~when HARQ information sent by the base station is received at the HARQ feedback time point, determining (730) a transmission result of the EDT data based on the HARQ information;~~

~~wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;~~

~~selecting the available scheduling resource from the multiple available scheduling resources and sending the EDT data to the base station on the selected available scheduling resource comprises:~~

~~selecting (810) the available scheduling resource from the multiple available scheduling resources based on the TBS and the UL transmission repetition count of the multiple available scheduling resources, and~~

~~sending (820) the EDT data to the base station on the selected available scheduling resource;~~

~~wherein the preset rule is that a HARQ information is made based on a maximum UL transmission repetition count;~~

determining the HARQ feedback time point for the EDT data according to the preset rule comprises:

determining (910) a UL transmission ending time point for the selected available scheduling resource based on the TBS and the UL transmission repetition count of the selected available scheduling resource;

determining (920) the maximum UL transmission repetition count according to the UL transmission repetition count in the selected available scheduling resource;

determining (930) a UL transmission ending time point corresponding to the maximum UL transmission repetition count based on the UL transmission ending time point; and

determining (940) the HARQ feedback time point based on the UL transmission ending time point corresponding to the maximum UL transmission repetition count, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point corresponding to the maximum UL transmission repetition count.

423. The method of claim 442, wherein the EDT data is uplink (UL) data required to be transmitted by the terminal in a random access process and is in a message 3 in the random access process.

~~13. The method of claim 11, wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count; and~~

~~selecting the available scheduling resource from the multiple available scheduling resources and sending the EDT data to the base station on the selected available scheduling resource comprises:~~

~~selecting the available scheduling resource from the multiple available scheduling resources based on the TBS and the UL transmission repetition count of the multiple available scheduling resources; and~~

~~sending the EDT data to the base station on the selected available scheduling~~

~~resource.~~

~~14. The method of claim 13, wherein the preset rule is that a HARQ information is made based on a maximum UL transmission repetition count; and~~

~~determining the HARQ feedback time point for the EDT data according to the preset rule comprises:~~

~~determining a UL transmission ending time point for the selected available scheduling resource based on the TBS and the UL transmission repetition count of the selected available scheduling resource;~~

~~determining the maximum UL transmission repetition count according to the UL transmission repetition count in the selected available scheduling resource;~~

~~determining a UL transmission ending time point corresponding to the maximum UL transmission repetition count based on the UL transmission ending time point; and~~

~~determining the HARQ feedback time point based on the UL transmission ending time point corresponding to the maximum UL transmission repetition count, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point corresponding to the maximum UL transmission repetition count.~~

~~142. The method of claim 142, wherein the HARQ information comprises first information indicating successful demodulation or second information indicating unsuccessful demodulation; and~~

~~determining the transmission result of the EDT data based on the HARQ information when the HARQ information sent by the base station is received at the HARQ feedback time point comprises:~~

~~receiving (950) the HARQ information from the base station at the HARQ feedback time point;~~

~~determining (960) that the transmission result of the EDT data is successful transmission in response to that the HARQ information is the first information; or~~

~~determining (970) that the transmission result of the EDT data is unsuccessful~~

transmission in response to that the HARQ information is the second information.

5. The method of claim 2, wherein the specified position is configured by the base station and is in a UL grant in a Random Access Response (RAR) sent to the terminal by the base station;
or

the preset rule comprises third information indicating the specified position, and the third information indicates a relative relationship between a HARQ feedback time point and a determined UL transmission ending time point

166. A hybrid automatic repeat request (HARQ) feedback method, performed by a terminal, characterized by the method comprising:~~The method of claim 13, wherein the preset rule is that a HARQ feedback is made for each UL transmission ending time point respectively for each available scheduling resource; and~~

selecting (710) an available scheduling resource from multiple available scheduling resources, wherein the multiple available scheduling resources are allocated by a base station to the terminal and are configured to provide Early Data Transmission (EDT) service;

sending (710) EDT data to the base station on the selected available scheduling resource;

determining (720) ~~the~~ a HARQ feedback time point for the EDT data according to ~~the~~ a preset rule ~~comprises~~; and

when HARQ information sent by the base station is received at the HARQ feedback time point, determining (730) a transmission result of the EDT data based on the HARQ information,

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;

selecting the available scheduling resource from the multiple available scheduling resources and sending the EDT data to the base station on the selected available scheduling resource comprises:

selecting (810) the available scheduling resource from the multiple available

scheduling resources based on the TBS and the UL transmission repetition count of the multiple available scheduling resources, and

sending (820) the EDT data to the base station on the selected available scheduling resource;

wherein the preset rule is that a HARQ feedback is made for each UL transmission ending time point respectively for each available scheduling resource;

determining the HARQ feedback time point for the EDT data according to the preset rule comprises:

determining (1010) a ~~UL~~ UL transmission ending time point corresponding to the selected available scheduling resource based on the TBS and the UL transmission repetition count in the selected available scheduling resource; and

determining (1020) a HARQ feedback time point corresponding to the UL transmission ending time point corresponding to the selected available scheduling resource, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.

177. The method of claim 166, wherein the HARQ information comprises first information indicating successful demodulation or second information indicating unsuccessful demodulation; and

determining the transmission result of the EDT data based on the HARQ information when the HARQ information sent by the base station is received at the HARQ feedback time point comprises:

receiving (1030) the HARQ information from the base station at the HARQ feedback time point corresponding to the UL transmission ending time point;

determining (1040) that the transmission result of the EDT data is successful transmission in response to that the HARQ information is the first information;-or

determining (1050) that the transmission result of the EDT data is unsuccessful transmission in response to that the HARQ information is the second information.

188. A hybrid automatic repeat request (HARQ) feedback method, performed by a terminal, characterized by the method comprising:

selecting (710) an available scheduling resource from multiple available scheduling resources, wherein the multiple available scheduling resources are allocated by a base station to the terminal and are configured to provide Early Data Transmission (EDT) service;

sending (710) EDT data to the base station on the selected available scheduling resource;

~~—The method of claim 13, wherein the preset rule is that a HARQ feedback is made only when a blind detection result is successful demodulation; and~~

determining (720) the a HARQ feedback time point for the EDT data according to the a preset rule comprises; and

when HARQ information sent by the base station is received at the HARQ feedback time point, determining (730) a transmission result of the EDT data based on the HARQ information;

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;

selecting the available scheduling resource from the multiple available scheduling resources and sending the EDT data to the base station on the selected available scheduling resource comprises:

selecting (810) the available scheduling resource from the multiple available scheduling resources based on the TBS and the UL transmission repetition count of the multiple available scheduling resources, and

sending (820) the EDT data to the base station on the selected available scheduling resource;

wherein the preset rule is that a HARQ feedback is made only when a blind detection result is successful demodulation;

determining the HARQ feedback time point for the EDT data according to the preset rule comprises:

determining (1110) a ~~UL~~ transmission ending time point corresponding to the

selected available scheduling resource based on the TBS and the UL transmission repetition count in the selected available scheduling resource; and

determining (1120) the HARQ feedback time point corresponding to the UL transmission ending time point corresponding to the selected available scheduling resource, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.

~~199.~~ The method of claim ~~188~~, wherein the HARQ information comprises the first information indicating successful demodulation; and

determining the transmission result of the EDT data based on the HARQ information when the HARQ information sent by the base station is received at the HARQ feedback time point comprises:

in response to (1130) receiving the HARQ information from the base station at the HARQ feedback time point corresponding to the UL transmission ending time point and the HARQ information being the first information, determining that the transmission result of the EDT data is successful transmission, and

in response to (1140) not receiving the HARQ information from the base station at the HARQ feedback time point corresponding to the UL transmission ending time point, determining that the transmission result of the EDT data is unsuccessful transmission.

~~20. The method of claim 14 or 16 or 18, wherein the specified position is configured by the base station and is in a UL grant in a Random Access Response (RAR) sent to the terminal by the base station; or~~

~~the preset rule comprises third information indicating the specified position, and the third information indicates a relative relationship between a HARQ feedback time point and a determined UL transmission ending time point.~~

10. A Hybrid Automatic Repeat reQuest (HARQ) feedback apparatus, implemented by a terminal, characterized by the apparatus comprising:

a selection module (201), configured to select an available scheduling resource from the multiple available scheduling resources, wherein the multiple available scheduling resources are allocated by a base station to the terminal and are configured to provide Early Data Transmission (EDT) service; and send EDT data to the base station on the selected available scheduling resource;

a second determination module (202), configured to determine a HARQ feedback time point for EDT data according to a preset rule; and

a third determination module (203), configured to, in response to that HARQ information sent by the base station is received at the HARQ feedback time point, determine a transmission result of the EDT data based on the HARQ information,

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;

the selection module (201) comprises:

a selection submodule (211), configured to select the available scheduling resource from the multiple available scheduling resources based on the TBS and the UL transmission repetition count of the multiple available scheduling resources; and

a sending submodule (212), configured to send the EDT data to the base station on the selected available scheduling resource,

wherein the preset rule is that a HARQ feedback is made based on a maximum UL transmission repetition count; and

the second determination module (202) comprises:

a first time point determination submodule (221), configured to determine a UL transmission ending time point for the selected available scheduling resource based on the TBS and the UL transmission repetition count of the selected available scheduling resource;

a repetition count determination submodule (222), configured to determine the maximum UL transmission repetition count according to the UL transmission repetition count in the selected available scheduling resource;

a second time point determination submodule (223), configured to determine a

UL transmission ending time point corresponding to the maximum UL transmission repetition count based on the UL transmission ending time point; and

a third time point determination submodule (224), configured to determine the HARQ feedback time point based on the UL transmission ending time point corresponding to the maximum UL transmission repetition count, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point corresponding to the maximum UL transmission repetition count.

11. A Hybrid Automatic Repeat request (HARQ) feedback apparatus, implemented by a terminal, characterized by the apparatus comprising:

a selection module (201), configured to select an available scheduling resource from multiple available scheduling resources, wherein the multiple available scheduling resources are allocated by a base station to the terminal and are configured to provide Early Data Transmission (EDT) service; and send EDT data to the base station on the selected available scheduling resource;

a second determination module (202), configured to determine a HARQ feedback time point for EDT data according to a preset rule; and

a third determination module (203), configured to, in response to that HARQ information sent by the base station is received at the HARQ feedback time point, determine a transmission result of the EDT data based on the HARQ information,

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;

the selection module (201) comprises:

a selection submodule (211), configured to select the available scheduling resource from the multiple available scheduling resources based on the TBS and the UL transmission repetition count of the multiple available scheduling resources; and

a sending submodule (212), configured to send the EDT data to the base station on the selected available scheduling resource,

wherein the preset rule is that a HARQ feedback is made for each UL transmission ending time point respectively for each available scheduling resource;

the second determination module (202) comprises:

a fourth time point determination submodule (241), configured to determine a UL transmission ending time point corresponding to the selected available scheduling resource based on the TBS and the UL transmission repetition count in the selected available scheduling resource, and

a fifth time point determination submodule (242), configured to determine a HARQ feedback time point corresponding to the UL transmission ending time point corresponding to the selected available scheduling resource, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.

12. A Hybrid Automatic Repeat request (HARQ) feedback apparatus, implemented by a terminal, characterized by the apparatus comprising:

a selection module(201), configured to select an available scheduling resource from multiple available scheduling resources, wherein the multiple available scheduling resources are allocated by a base station to the terminal and are configured to provide Early Data Transmission (EDT) service; and send EDT data to the base station on the selected available scheduling resource;

a second determination module (202), configured to determine a HARQ feedback time point for EDT data according to a preset rule; and

a third determination module (203), configured to, in response to that HARQ information sent by the base station is received at the HARQ feedback time point, determine a transmission result of the EDT data based on the HARQ information,

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;

the selection module (201) comprises:

a selection submodule (211), configured to select the available scheduling

resource from the multiple available scheduling resources based on the TBS and the UL transmission repetition count of the multiple available scheduling resources; and
a sending submodule (212), configured to send the EDT data to the base station on the selected available scheduling resource,
wherein the preset rule is that a HARQ feedback is made only when a blind detection result is successful demodulation;
the second determination module (202) comprises:
a sixth time point determination submodule (261), configured to determine a UL transmission ending time point corresponding to the selected available scheduling resource based on the TBS and the UL transmission repetition count in the selected available scheduling resource, and
a seventh time point determination submodule (262), configured to determine the HARQ feedback time point corresponding to the UL transmission ending time point corresponding to the selected available scheduling resource, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.

2413. A Hybrid Automatic Repeat reQuest (HARQ) feedback apparatus, applicable to a base station that allocates, to a terminal, multiple available scheduling resources configured to provide Early Data Transmission (EDT) service, characterized by the apparatus comprising:

a detection module (121), configured to perform blind detection on EDT data transmitted to the base station by the terminal on respective available scheduling resources;

a first determination module (122), configured to determine a HARQ feedback time point for the blind detection according to a preset rule; and

a sending module (123), configured to send HARQ information about the blind detection to the terminal at the HARQ feedback time point;

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;

the detection module(121) comprises:

a first determination submodule (131), configured to determine UL transmission ending time points for respective available scheduling resources based on the TBS and the UL transmission repetition count in respective available scheduling resources; and

a detection submodule (132), configured to perform blind detection on the EDT data at respective UL transmission ending time points,

wherein the preset rule is that a HARQ feedback is made based on a maximum UL transmission repetition count; and

the first determination module(122) comprises:

a second determination submodule(141), configured to determine the maximum UL transmission repetition count according to the UL transmission repetition count in a respective available scheduling resource;

a third determination submodule (142), configured to determine a UL transmission ending time point corresponding to the maximum UL transmission repetition count based on a respective UL transmission ending time point; and

a fourth determination submodule (143), configured to determine the HARQ feedback time point based on the UL transmission ending time point corresponding to the maximum UL transmission repetition count, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point corresponding to the maximum UL transmission repetition count.

~~22. The apparatus of claim 21, wherein the EDT data is uplink (UL) data transmitted by the terminal in a random access process and is in a message 3 in the random access process.~~

~~23. The apparatus of claim 21, wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count; and~~

~~the detection module comprises:~~

~~a first determination submodule, configured to determine UL transmission ending time points for respective available scheduling resources based on the TBS and the UL~~

~~transmission repetition count in respective available scheduling resources; and~~

~~a detection submodule, configured to perform blind detection on the EDT data at respective UL transmission ending time points.~~

~~24. The apparatus of claim 23, wherein the preset rule is that a HARQ feedback is made based on a maximum UL transmission repetition count; and~~

~~the first determination module comprises:~~

~~a second determination submodule, configured to determine the maximum UL transmission repetition count according to the UL transmission repetition count in a respective available scheduling resource;~~

~~a third determination submodule, configured to determine a UL transmission ending time point corresponding to the maximum UL transmission repetition count based on a respective UL transmission ending time point; and~~

~~a fourth determination submodule, configured to determine the HARQ feedback time point based on the UL transmission ending time point corresponding to the maximum UL transmission repetition count, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point corresponding to the maximum UL transmission repetition count.~~

~~25. The apparatus of claim 24, wherein the HARQ information about the blind detection comprises first information indicating successful demodulation or second information indicating unsuccessful demodulation; and~~

~~the sending module comprises:~~

~~a first sending submodule, configured to send the first information to the terminal at the HARQ feedback time point in response to determining that each blind detection result at each UL transmission ending time point comprises successful demodulation, and~~

~~a second sending submodule, configured to send the second information to the terminal at the HARQ feedback time point in response to determining that each blind detection result does not comprise successful demodulation.~~

14. A Hybrid Automatic Repeat request (HARQ) feedback apparatus, applicable to a base station that allocates, to a terminal, multiple available scheduling resources configured to provide Early Data Transmission (EDT) service, characterized by the apparatus comprising:

a detection module (121), configured to perform blind detection on EDT data transmitted to the base station by the terminal on respective available scheduling resources;

a first determination module (122), configured to determine a HARQ feedback time point for the blind detection according to a preset rule; and

a sending module (123), configured to send HARQ information about the blind detection to the terminal at the HARQ feedback time point,

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count;

the detection module (121) comprises:

a first determination submodule (131), configured to determine UL transmission ending time points for respective available scheduling resources based on the TBS and the UL transmission repetition count in respective available scheduling resources; and

a detection submodule (132), configured to perform blind detection on the EDT data at respective UL transmission ending time points,

~~26. The apparatus of claim 23, wherein the preset rule is that a HARQ feedback is made for each UL transmission ending time point respectively for each available scheduling resource; and~~

~~the first determination module (122) comprises:~~

~~a fifth determination submodule (161), configured to determine a HARQ feedback time point corresponding to any UL transmission ending time point, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.~~

~~27. The apparatus of claim 26, wherein the HARQ information about the blind detection~~

~~comprises first information indicating successful demodulation or second information indicating unsuccessful demodulation; and~~

~~the sending module comprises:~~

~~a third sending submodule, configured to, in response to determining that a blind detection result at any UL transmission ending time point is successful demodulation, send the first information to the terminal at the HARQ feedback time point corresponding to the UL transmission ending time point, and~~

~~a fourth sending submodule, configured to, in response to determining that the blind detection result is unsuccessful demodulation, send the second information to the terminal at the HARQ feedback time point corresponding to the UL transmission ending time point.~~

~~28. The apparatus of claim 23, wherein the preset rule is that a HARQ feedback is made only when a blind detection result is successful demodulation; and~~

~~the first determination module comprises:~~

~~a sixth determination submodule, configured to determine a HARQ feedback time point corresponding to any UL transmission ending time point, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.~~

~~29. The apparatus of claim 28, wherein the HARQ information about the blind detection comprises the first information indicating successful demodulation; and~~

~~the sending module comprises:~~

~~a fifth sending submodule, configured to, in response to determining that a blind detection result at any UL transmission ending time point is successful demodulation, send the first information to the terminal at the HARQ feedback time point corresponding to the UL transmission ending time point, and~~

~~a sixth sending submodule, configured to, in response to determining that the blind detection result is unsuccessful demodulation, not perform HARQ feedback at the HARQ feedback time point corresponding to the UL transmission ending time point.~~

~~30. The apparatus of claim 24 or 26 or 28, wherein the specified position is configured by the base station and is in a UL grant in a Random Access Response (RAR) sent to the terminal by the base station; or~~

~~the preset rule comprises third information indicating the specified position, and the third information indicates a relative relationship between a HARQ feedback time point and a determined UL transmission ending time point.~~

~~31. A Hybrid Automatic Repeat reQuest (HARQ) feedback apparatus, applicable to a terminal, a base station allocating to the terminal multiple available scheduling resources configured to provide Early Data Transmission (EDT) service, the apparatus comprising:~~

~~a selection module, configured to select an available scheduling resource from the multiple available scheduling resources and send EDT data to the base station on the selected available scheduling resource;~~

~~a second determination module, configured to determine a HARQ feedback time point for EDT data according to a preset rule; and~~

~~a third determination module, configured to, in response to that HARQ information sent by the base station is received at the HARQ feedback time point, determine a transmission result of the EDT data based on the HARQ information.~~

~~32. The apparatus of claim 31, wherein the EDT data is uplink (UL) data required to be transmitted by the terminal in a random access process and is in a message 3 in the random access process.~~

~~33. The apparatus of claim 31, wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission repetition count; and~~

~~the selection module comprises:~~

~~a selection submodule, configured to select the available scheduling resource from the multiple available scheduling resources based on the TBS and the UL transmission repetition count of the multiple available scheduling resources; and~~

~~a sending submodule, configured to send the EDT data to the base station on the selected available scheduling resource.~~

34. ~~The apparatus of claim 33, wherein the preset rule is that a HARQ feedback is made based on a maximum UL transmission repetition count; and~~

~~the second determination module comprises:~~

~~a first time point determination submodule, configured to determine a UL transmission ending time point for the selected available scheduling resource based on the TBS and the UL transmission repetition count of the selected available scheduling resource;~~

~~a repetition count determination submodule, configured to determine the maximum UL transmission repetition count according to the UL transmission repetition count in the selected available scheduling resource;~~

~~a second time point determination submodule, configured to determine a UL transmission ending time point corresponding to the maximum UL transmission repetition count based on the UL transmission ending time point; and~~

~~a third time point determination submodule, configured to determine the HARQ feedback time point based on the UL transmission ending time point corresponding to the maximum UL transmission repetition count, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point corresponding to the maximum UL transmission repetition count.~~

35. ~~The apparatus of claim 34, wherein the HARQ information comprises first information indicating successful demodulation or second information indicating unsuccessful demodulation; and~~

~~the third determination module comprises:~~

~~a first receiving submodule, configured to receive the HARQ information from the base station at the HARQ feedback time point;~~

~~a first processing submodule, configured to determine that the transmission result of the EDT data is successful transmission in response to that the HARQ information is the first~~

information; and

~~a second processing submodule, configured to determine that the transmission result of the EDT data is unsuccessful transmission in response to that the HARQ information is the second information.~~

~~36. The apparatus of claim 33, wherein the preset rule is that a HARQ feedback is made for each UL transmission ending time point respectively for each available scheduling resource; and~~

~~the second determination module comprises:~~

~~a fourth time point determination submodule, configured to determine a UL transmission ending time point corresponding to the selected available scheduling resource based on the TBS and the UL transmission repetition count in the selected available scheduling resource, and~~

~~a fifth time point determination submodule, configured to determine a HARQ feedback time point corresponding to the UL transmission ending time point corresponding to the selected available scheduling resource, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.~~

~~37. The apparatus of claim 36, wherein the HARQ information comprises first information indicating successful demodulation or second information indicating unsuccessful demodulation; and~~

~~the third determination module comprises:~~

~~a second receiving submodule, configured to receive the HARQ information from the base station at the HARQ feedback time point corresponding to the UL transmission ending time point;~~

~~a third processing submodule, configured to determine that the transmission result of the EDT data is successful transmission when the HARQ information is the first information; and~~

~~a fourth processing submodule, configured to determine that the transmission result~~

~~of the EDT data is unsuccessful transmission when the HARQ information is the second information.~~

~~38. The apparatus of claim 33, wherein the preset rule is that a HARQ feedback is made only when a blind detection result is successful demodulation; and~~

~~the second determination module comprises:~~

~~a sixth time point determination submodule, configured to determine a UL transmission ending time point corresponding to the selected available scheduling resource based on the TBS and the UL transmission repetition count in the selected available scheduling resource, and~~

~~a seventh time point determination submodule, configured to determine the HARQ feedback time point corresponding to the UL transmission ending time point corresponding to the selected available scheduling resource, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.~~

~~39. The apparatus of claim 38, wherein the HARQ information comprises the first information indicating successful demodulation; and~~

~~the third determination module comprises:~~

~~a fifth processing submodule, configured to, in response to receiving the HARQ information from the base station at the HARQ feedback time point corresponding to the UL transmission ending time point and the HARQ information being the first information, determine that the transmission result of the EDT data is successful transmission; and~~

~~a sixth processing submodule, configured to, in response to not receiving the HARQ information from the base station at the HARQ feedback time point corresponding to the UL transmission ending time point, determine that the transmission result of the EDT data is unsuccessful transmission.~~

~~40. The apparatus of claim 34 or 36 or 38, wherein the specified position is configured by the base station and is in a UL grant in a Random Access Response (RAR) sent to the terminal by~~

~~the base station; or~~

~~the preset rule comprises third information indicating the specified position, and the third information indicates a relative relationship between a HARQ feedback time point and a determined UL transmission ending time point.~~

~~41. A non-transitory computer-readable storage medium, having stored computer instructions configured to execute the Hybrid Automatic Repeat reQuest (HARQ) feedback method of any one of claims 1-10.~~

~~42. A non-transitory computer-readable storage medium, having stored computer instructions configured to execute the Hybrid Automatic Repeat reQuest (HARQ) feedback method of any one of claims 11-20.~~

4315. A Hybrid Automatic Repeat reQuest (HARQ) feedback apparatus, applicable to a base station that allocates to, a terminal, multiple available scheduling resources configured to provide Early Data Transmission (EDT) service, characterized by the apparatus comprising:

~~a processor; and~~

~~memory configured to store instructions executable by a processor;~~

~~wherein the processor is configured to:~~

a detection module (121), configured to perform blind detection on EDT data transmitted to the base station by the terminal on respective available scheduling resources;

a first determination module (122), configured to determine a HARQ feedback time point for the blind detection according to a preset rule; and

a sending module (123), configured to send HARQ information about the blind detection to the terminal at the HARQ feedback time point,

wherein the available scheduling resource comprises a Transmission Block Size (TBS) and a UL transmission reception count;

the detection module (121) comprises:

a first determination submodule (131) configured to determine UL transmission

ending time points for respective available scheduling resources based on the TBS and the UL transmission repetition count in respective available scheduling resources; and

a detection submodule (132), configured to perform blind detection on the EDT data at respective UL transmission ending time points,

wherein the preset rule is that a HARQ feedback is made only when a blind detection result is successful demodulation;

the first determination module (122) comprises:

a sixth determination submodule (181), configured to determine a HARQ feedback time point corresponding to any UL transmission ending time point, where the determined HARQ feedback time point is at a specified position after the UL transmission ending time point.

~~44. A Hybrid Automatic Repeat reQuest (HARQ) feedback apparatus, applicable to a terminal, a base station allocating multiple available scheduling resources configured to provide Early Data Transmission (EDT) service to the terminal, the apparatus comprising:~~

~~a processor; and~~

~~memory configured to store instructions executable by a processor;~~

~~wherein the processor is configured to:~~

~~select an available scheduling resource from the multiple available scheduling resources;~~

~~send EDT data to the base station on the selected available scheduling resource;~~

~~determine a HARQ feedback time point for the EDT data according to a preset rule; and~~

~~when HARQ information sent by the base station is received at the HARQ feedback time point, determine a transmission result of the EDT data based on the HARQ information.~~