

CLAIMS

What is claimed is:

1. A resource allocation method, applied to a terminal device and comprising:

receiving uplink resource allocation rule information configured for a path of a bearer of the terminal device, wherein the uplink resource allocation rule information comprises a first uplink resource allocation rule and/or a second uplink resource allocation rule, the first uplink resource allocation rule is an uplink resource allocation rule used when the path is in an activated state, and the second uplink resource allocation rule is an uplink resource allocation rule used when the path is in a deactivated state; and

performing uplink resource allocation based on the uplink resource allocation rule information.

2. The method according to claim 1, wherein the bearer comprises at least two paths; and the performing uplink resource allocation based on the uplink resource allocation rule information comprises:

allocating, by a media access control MAC entity of the terminal device based on uplink resource allocation rule information corresponding to a target path, an uplink resource for the target path,

wherein the target path is a path of the at least two paths which corresponds to the MAC entity.

3. The method according to claim 1, wherein when the uplink resource allocation rule information comprises the first uplink resource allocation rule and the second uplink resource allocation rule, the performing uplink resource allocation based on the uplink resource allocation rule information comprises:

allocating an uplink resource for the path by using the first uplink resource allocation rule when the path is in the activated state; and

allocating an uplink resource for the path by using the second uplink resource allocation rule when the path is in the deactivated state.

4. The method according to any one of claims 1 to 3, wherein

the first uplink resource allocation rule comprises at least one of the following:

type information of a first available uplink resource; and

type information of a first unavailable uplink resource;

and/or,

the second uplink resource allocation rule comprises at least one of the following:

type information of a second available uplink resource; and

type information of a second unavailable uplink resource.

5. The method according to claim 4, wherein

the type information of the uplink resource comprises at least one of the following: a sub-carrier spacing SCS corresponding to the uplink resource; a carrier corresponding to the uplink resource; a bandwidth part BWP corresponding to the uplink resource; beam information corresponding to the uplink resource; transmission node information corresponding to the uplink resource; duration of a transmission channel corresponding to the uplink resource; and grant type corresponding to the uplink resource;

and/or,

the type information of the first available uplink resource and/or the type information of the second available uplink resource comprises information used to indicate any uplink resource available;

and/or,

the type information of the first unavailable uplink resource and/or the type information of the second unavailable uplink resource comprises information used to indicate any uplink resource unavailable.

6. The method according to claim 5, wherein

the beam information comprises at least one of the following: a beam identifier; a cell identifier corresponding to a beam; a frequency identifier corresponding to a beam; a BWP identifier corresponding to a beam; a control channel identifier corresponding to a beam; and a media access control MAC entity identifier corresponding to a beam;

and/or,

the transmission node information comprises at least one of the following: a transmission node identifier; a cell identifier corresponding to a transmission node; a frequency identifier corresponding to a transmission node; a BWP identifier corresponding to a transmission node; a control channel identifier corresponding to a transmission node; and a media access control MAC entity identifier corresponding to a transmission node.

7. The method according to claim 6, wherein the beam identifier and/or the transmission node identifier comprises at least one of the following:

- a synchronization signal block SSB identifier;
- a channel state information reference signal CSI-RS identifier;
- a reference signal identifier other than the CSI-RS identifier; and
- a port identifier corresponding to a reference signal.

8. The method according to claim 6, wherein the control channel identifier corresponding to a beam and/or the control channel identifier corresponding to a transmission node comprises at least one of the following:

- a control channel type identifier;
- a resource location identifier of a control channel;
- a reference signal identifier of a control channel; and
- a port identifier corresponding to a reference signal of a control channel.

9. A resource allocation method, applied to a network-side device and comprising:
transmitting, to a terminal device, uplink resource allocation rule information configured for a path of a bearer of the terminal device,

wherein the uplink resource allocation rule information comprises a first uplink resource allocation rule and/or a second uplink resource allocation rule, the first uplink resource allocation rule is an uplink resource allocation rule used when the path is in an activated state, and the second uplink resource allocation rule is an uplink resource allocation rule used when the path is in a deactivated state.

10. The method according to claim 9, wherein

the first uplink resource allocation rule comprises at least one of the following:

- type information of a first available uplink resource; and
 - type information of a first unavailable uplink resource;
- and/or,

the second uplink resource allocation rule comprises at least one of the following:

- type information of a second available uplink resource; and
- type information of a second unavailable uplink resource.

11. The method according to claim 10, wherein

the type information of the uplink resource comprises at least one of the following: a

sub-carrier spacing SCS corresponding to the uplink resource; a carrier corresponding to the uplink resource; a bandwidth part BWP corresponding to the uplink resource; beam information corresponding to the uplink resource; transmission node information corresponding to the uplink resource; duration of a transmission channel corresponding to the uplink resource; and grant type corresponding to the uplink resource;

and/or,

the type information of the first available uplink resource and/or the type information of the second available uplink resource comprises information used to indicate any uplink resource available;

and/or,

the type information of the first unavailable uplink resource and/or the type information of the second unavailable uplink resource comprises information used to indicate any uplink resource unavailable.

12. The method according to claim 11, wherein

the beam information comprises at least one of the following: a beam identifier; a cell identifier corresponding to a beam; a frequency identifier corresponding to a beam; a BWP identifier corresponding to a beam; a control channel identifier corresponding to a beam; and a media access control MAC entity identifier corresponding to a beam;

and/or,

the transmission node information comprises at least one of the following: a transmission node identifier; a cell identifier corresponding to a transmission node; a frequency identifier corresponding to a transmission node; a BWP identifier corresponding to a transmission node; a control channel identifier corresponding to a transmission node; and a media access control MAC entity identifier corresponding to a transmission node.

13. The method according to claim 12, wherein the beam identifier and/or the transmission node identifier comprises at least one of the following:

a synchronization signal block SSB identifier;

a channel state information reference signal CSI-RS identifier;

a reference signal identifier other than the CSI-RS identifier; and

a port identifier corresponding to a reference signal.

14. The method according to claim 12, wherein the control channel identifier

corresponding to a beam and/or the control channel identifier corresponding to a transmission node comprises at least one of the following:

- a control channel type identifier;
- a resource location identifier of a control channel;
- a reference signal identifier of a control channel; and
- a port identifier corresponding to a reference signal of a control channel.

15. A terminal device, comprising:

a receiving module, configured to receive uplink resource allocation rule information configured for a path of a bearer of the terminal device, wherein the uplink resource allocation rule information comprises a first uplink resource allocation rule and/or a second uplink resource allocation rule, the first uplink resource allocation rule is an uplink resource allocation rule used when the path is in an activated state, and the second uplink resource allocation rule is an uplink resource allocation rule used when the path is in a deactivated state; and

an allocation module, configured to perform uplink resource allocation based on the uplink resource allocation rule information.

16. The terminal device according to claim 15, wherein the bearer comprises at least two paths; and

the allocation module is specifically configured to:

allocate, by a media access control MAC entity of the terminal device based on uplink resource allocation rule information corresponding to a target path, an uplink resource for the target path,

wherein the target path is a path of the at least two paths which corresponds to the MAC entity.

17. The terminal device according to claim 15, wherein the allocation module is specifically configured to:

when the uplink resource allocation rule information comprises the first uplink resource allocation rule and the second uplink resource allocation rule, allocate an uplink resource for the path by using the first uplink resource allocation rule when the path is in the activated state; and

allocate an uplink resource for the path by using the second uplink resource allocation rule when the path is in the deactivated state.

18. The terminal device according to any one of claims 15 to 17, wherein

the first uplink resource allocation rule comprises at least one of the following:

type information of a first available uplink resource; and

type information of a first unavailable uplink resource;

and/or,

the second uplink resource allocation rule comprises at least one of the following:

type information of a second available uplink resource; and

type information of a second unavailable uplink resource.

19. A network-side device, comprising:

a transmitting module, configured to transmit, to a terminal device, uplink resource allocation rule information configured for a path of a bearer of the terminal device,

wherein the uplink resource allocation rule information comprises a first uplink resource allocation rule and/or a second uplink resource allocation rule, the first uplink resource allocation rule is an uplink resource allocation rule used when the path is in an activated state, and the second uplink resource allocation rule is an uplink resource allocation rule used when the path is in a deactivated state.

20. The network-side device according to claim 19, wherein

the first uplink resource allocation rule comprises at least one of the following:

type information of a first available uplink resource; and

type information of a first unavailable uplink resource;

and/or,

the second uplink resource allocation rule comprises at least one of the following:

type information of a second available uplink resource; and

type information of a second unavailable uplink resource.