

WHAT IS CLAIMED IS:

1. A first device comprising:
at least one processor; and
at least one memory storing computer program codes;
5 the at least one memory and the computer program codes being configured, with the
at least one processor, to cause the first device to:
receive, from a second device, an indication to perform Msg3 transmission;
transmit, to the second device, information of the first device for contention
resolution; and
10 in case a configuration of a 4-step random access channel is unavailable in
an active bandwidth part for the first device, determine a duration for monitoring a
contention resolution message based on one of:
a first configuration of a 2-step random access channel in the active
bandwidth part, or
15 a second configuration of a 4-step random access channel in a
bandwidth part different from the active bandwidth part.
2. The first device of claim 1, wherein the first device is caused to determine the
duration by:
20 in accordance with a determination that the first configuration indicates a contention
resolution timer, determining the duration as a time length of the contention resolution
timer.
3. The first device of claim 1, wherein the first device is caused to determine the
25 duration by:
in case the first configuration does not indicate a contention resolution timer,
determining the duration as a time length of a contention resolution timer indicated in the
second configuration.
- 30 4. The first device of claim 1, wherein the bandwidth part comprises one of the
following:
an initial bandwidth part for the first device,
a default bandwidth part for the first device,

a first active bandwidth part for the first device, or
a predetermined bandwidth part indicated by the second device.

5 5. The first device of claim 1, wherein the at least one memory and the computer
program codes are further configured, with the at least one processor, to cause the first
device to:

10 in case the first configuration does not indicate a contention resolution timer,
determine the duration as a time length for monitoring a MSGB from the second device, the
MSGB being transmitted by the second device in response to a MSGA transmitted over the
2-step random access channel.

6. The first device of claim 5, wherein the time length for monitoring the MSGB
is a time length of an MSGB response window.

15 7. The first device of claim 1, wherein the information of the first device for
contention resolution is transmitted via a Msg3 of a random access procedure.

20 8. The first device of claim 1, wherein the at least one memory and the computer
program codes are further configured, with the at least one processor, to cause the first
device to:

receive the first configuration and the second configuration from the second device.

25 9. The first device of claim 1, wherein the first device comprises a terminal
device, and the second device comprises a network device.

30 10. A second device comprising:
at least one processor; and
at least one memory storing computer program codes;
the at least one memory and the computer program codes being configured, with the
at least one processor, to cause the second device to:

transmit, to a first device, an indication to perform Msg3 transmission;

in case a configuration of a 4-step random access channel is unavailable in
an active bandwidth part for the first device, determine a duration for transmitting a
contention resolution message to the first device based on one of:

a first configuration of a 2-step random access channel in the active bandwidth part, or

a second configuration of a 4-step random access channel in a bandwidth part different from the active bandwidth part; and

5 in accordance with a determination that information of the first device for contention resolution is received from the first device, transmit the contention resolution message to the first device within the duration.

11. The second device of claim 10, wherein the second device is caused to
10 determine the duration by:

in accordance with a determination that the first configuration indicates a contention resolution timer, determining the duration as a time length of the contention resolution timer.

12. The second device of claim 10, wherein the second device is caused to
15 determine the duration by:

in case the first configuration does not indicate a contention resolution timer, determining the duration as a time length of a contention resolution timer indicated in the second configuration.

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13. The second device of claim 10, wherein the bandwidth part comprises one of the following:

an initial bandwidth part for the first device,

a default bandwidth part for the first device,

25 a first active bandwidth part for the first device, or

a predetermined bandwidth part indicated by the second device.

14. The second device of claim 10, wherein the at least one memory and the computer program codes are further configured, with the at least one processor, to cause the
30 second device to:

in case the first configuration does not indicate a contention resolution timer, determine the duration as a time length for the first device to monitor a MSGB from the second device, the MSGB being transmitted by the second device in response to a MSGA transmitted over the 2-step random access channel.

15. The second device of claim 14, wherein the time length for monitoring the MSGB is a time length of an MSGB response window.

5 16. The second device of claim 10, wherein the information of the first device for contention resolution is received via a Msg3 of a random access procedure.

10 17. The second device of claim 10, wherein the at least one memory and the computer program codes are further configured, with the at least one processor, to cause the second device to:

determine the first configuration and the second configuration; and
transmit the first configuration and the second configuration to the first device.

15 18. The second device of claim 17, wherein the second device is caused to determine the first configuration by:

in accordance with a determination that the configuration of the 4-step random access channel is unavailable in the active bandwidth part, determining the first configuration to indicate a contention resolution timer for the active bandwidth part.

20 19. The second device of claim 17, wherein the second device is caused to determine the first configuration by:

determining the first configuration to indicate a contention resolution timer for the active bandwidth part, regardless of whether the 4-step random access channel is available in the active bandwidth part.

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20. The second device of claim 10, wherein the first device comprises a terminal device, and the second device comprises a network device.

30 21. A method comprising:
receiving, at a first device from a second device, an indication to perform Msg3 transmission;

transmitting, to the second device, information of the first device for contention resolution; and

in case a configuration of a 4-step random access channel is unavailable in an active

bandwidth part for the first device, determining a duration for monitoring a contention resolution message based on one of:

a first configuration of a 2-step random access channel in the active bandwidth part, or

5 a second configuration of a 4-step random access channel in a bandwidth part different from the active bandwidth part.

22. A method comprising:

transmitting, at a second device to a first device, an indication to perform Msg3
10 transmission;

in case a configuration of a 4-step random access channel is unavailable in an active bandwidth part for the first device, determining a duration for transmitting a contention resolution message to the first device based on one of:

a first configuration of a 2-step random access channel in the active
15 bandwidth part, or

a second configuration of a 4-step random access channel in a bandwidth part different from the active bandwidth part; and

in accordance with a determination that information of the first device for contention resolution is received from the first device, transmitting the contention
20 resolution message to the first device within the duration.

23. An apparatus comprising:

means for receiving, at a first device from a second device, an indication to perform
Msg3 transmission;

25 means for transmitting, to the second device, information of the first device for contention resolution; and

means for in case a configuration of a 4-step random access channel is unavailable in an active bandwidth part for the first device, determining a duration for monitoring a contention resolution message based on one of:

30 a first configuration of a 2-step random access channel in the active bandwidth part, or

a second configuration of a 4-step random access channel in a bandwidth part different from the active bandwidth part.

24. An apparatus comprising:
- means for transmitting, at a second device to a first device, an indication to perform
Msg3 transmission;
- means for in case a configuration of a 4-step random access channel is unavailable
5 in an active bandwidth part for the first device, determining a duration for transmitting a
contention resolution message to the first device based on one of:
- a first configuration of a 2-step random access channel in the active
bandwidth part, or
- a second configuration of a 4-step random access channel in a bandwidth
10 part different from the active bandwidth part; and
- means for in accordance with a determination that information of the first device for
contention resolution is received from the first device, transmitting the contention
resolution message to the first device within the duration.
- 15 25. A non-transitory computer readable medium comprising program instructions
for causing an apparatus to perform at least the method of claim 21 or 22.