

DISCONTINUOUS RECEPTION (DRX) CONFIGURATION FOR AUTOMATIC NEIGHBOR RELATION (ANR)

TECHNICAL FIELD

This patent document is directed generally to wireless communications.

BACKGROUND

Mobile communication technologies are moving the world toward an increasingly connected and networked society. The rapid growth of mobile communications and advances in technology have led to greater demand for capacity and connectivity. Other aspects, such as energy consumption, device cost, spectral efficiency, and latency are also important to meeting the needs of various communication scenarios. Various techniques, including new ways to provide higher quality of service, are being discussed.

SUMMARY

This document discloses methods, systems, and devices related to digital wireless communication, and more specifically, to techniques related to coordinating DRX for ANR.

In a first aspect, the present disclosure provides a method for wireless communication, comprising: transmitting, by a first network node upon triggering a global cell identification report by a terminal that requires aligned discontinuous reception (DRX) configurations between the first network node and a second network node, a request message to the second network node, the request message comprising an indicator that requests an alignment of a DRX configuration associated with the second network node and a DRX configuration associated with the first network node, wherein the alignment indicates that (i) a cycle length of the DRX configuration associated with the second network node matches a cycle length of the DRX configuration associated with the first network node and (ii) an on-duration of the DRX configuration associated with the first network node is greater than, and entirely contains, an on-duration of the DRX configuration associated with the second network node.

In a second aspect, the present disclosure provides an apparatus for wireless

communication implemented as a first network node, comprising a processor that is configured to: transmit, upon triggering a global cell identification report by a terminal that requires aligned discontinuous reception (DRX) configurations between the first network node and a second network node, a request message to the second network node, the request message comprising an indicator that requests an alignment of a DRX configuration associated with the second network node and a DRX configuration associated with the first network node, the alignment indicates that (i) a cycle length of the DRX configuration associated with the second network node matches a cycle length of the DRX configuration associated with the first network node and (ii) an on-duration of the DRX configuration associated with the first network node is greater than, and entirely contains, an on-duration of the DRX configuration associated with the second network node.

In a third aspect, the present disclosure provides an apparatus for wireless communication implemented as a second network node, comprising a processor that is configured to: receive a request message from a first network node upon the first network node triggering a global cell identification report by a terminal that requires aligned discontinuous reception (DRX) configurations between the first network node and the second network node, the request message comprising an indicator that requests an alignment of a DRX configuration associated with the second network node and a DRX configuration associated with the first network node, wherein the alignment indicates that (i) a cycle length of the DRX configuration associated with the second network node matches a cycle length of the DRX configuration associated with the first network node and (ii) an on-duration of the DRX configuration associated with the first network node is greater than, and entirely contains, an on-duration of the DRX configuration associated with the second network node.

In a fourth aspect, the present disclosure provides a method for wireless communication, comprising: receiving, by a second network node, a request message from a first network node upon the first network node triggering a global cell identification report by a terminal that requires aligned discontinuous reception (DRX) configurations between the first network node and the second network node, the request message comprising an indicator that

requests an alignment of a DRX configuration associated with the second network node and a DRX configuration associated with the first network node, wherein the alignment indicates that (i) a cycle length of the DRX configuration associated with the second network node matches a cycle length of the DRX configuration associated with the first network node and (ii) an on-duration of the DRX configuration associated with the first network node is greater than, and entirely contains, an on-duration of the DRX configuration associated with the second network node.

In one exemplary embodiment, a method for wireless communication includes a first network node transmitting a request message to a second network node requesting a discontinuous reception configuration associated with the second network node.

In another exemplary embodiment, a method for wireless communication includes a first network node transmitting a request message to a second network node, the request message indicating a request to trigger a global cell identification report of a terminal and including information relating to a target cell used for measuring the global cell identification report.

In another exemplary embodiment, a method for wireless communication includes a first network node receiving a measurement report from a terminal including a global cell identifier report. The method also includes the first network node transmitting a request message to a second network node that includes a discontinuous reception switch indicator that is set to a false value indicating that a discontinuous reception configuration associated with the second network node is not needed based on receiving the measurement report from the terminal.

CLAIMS

What is claimed is:

1. A method for wireless communication, comprising:
transmitting, by a first network node upon triggering a global cell identification report by a terminal that requires aligned discontinuous reception (DRX) configurations between the first network node and a second network node, a request message to the second network node, the request message comprising an indicator that requests an alignment of a DRX configuration associated with the second network node and a DRX configuration associated with the first network node, wherein the alignment indicates that (i) a cycle length of the DRX configuration associated with the second network node matches a cycle length of the DRX configuration associated with the first network node and (ii) an on-duration of the DRX configuration associated with the first network node is greater than, and entirely contains, an on-duration of the DRX configuration associated with the second network node.
2. The method of claim 1, wherein the cycle length of the DRX configuration associated with the second network node is a DRX long cycle.
3. The method of claim 1, wherein the first network node is a master node and the second network node is a secondary node in a network.
4. The method of claim 1, wherein the request message is an inter-node Radio Resource Configuration (RRC) message container CG-ConfigInfo.
5. An apparatus for wireless communication implemented as a first network node, comprising a processor that is configured to :
transmit, upon triggering a global cell identification report by a terminal that requires aligned discontinuous reception (DRX) configurations between the first network node and a second network node, a request message to the second network node, the request message comprising an indicator that requests an alignment of a DRX configuration associated with the

second network node and a DRX configuration associated with the first network node, wherein the alignment indicates that (i) a cycle length of the DRX configuration associated with the second network node matches a cycle length of the DRX configuration associated with the first network node and (ii) an on-duration of the DRX configuration associated with the first network node is greater than, and entirely contains, an on-duration of the DRX configuration associated with the second network node.

6. The apparatus of claim 5, wherein the cycle length of the DRX configuration associated with the second network node is a DRX long cycle.

7. The apparatus of claim 5, wherein the first network node is a master node and the second network node is a secondary node in a network.

8. The apparatus of claim 5, wherein the request message comprises an inter-node Radio Resource Configuration (RRC) message container CG-ConfigInfo.

9. An apparatus for wireless communication implemented as a second network node, comprising a processor that is configured to:

receive a request message from a first network node upon the first network node triggering a global cell identification report by a terminal that requires aligned discontinuous reception (DRX) configurations between the first network node and the second network node, the request message comprising an indicator that requests an alignment of a DRX configuration associated with the second network node and a DRX configuration associated with the first network node, wherein the alignment indicates that (i) a cycle length of the DRX configuration associated with the second network node matches a cycle length of the DRX configuration associated with the first network node and (ii) an on-duration of the DRX configuration associated with the first network node is greater than, and entirely contains, an on-duration of the DRX configuration associated with the second network node.

10. The apparatus of claim 9, wherein the cycle length of the DRX configuration associated with the second network node is a DRX long cycle.

11. The apparatus of claim 9, wherein the processor is further configured to:
modify the DRX configuration based on the request message.
12. The apparatus of claim 9, wherein the first network node is a master node and the second network node is a secondary node.
13. The apparatus of claim 11, wherein the request message comprises an inter-node Radio Resource Configuration (RRC) message container CG-ConfigInfo.
14. A method for wireless communication, comprising:
receiving, by a second network node, a request message from a first network node upon the first network node triggering a global cell identification report by a terminal that requires aligned discontinuous reception (DRX) configurations between the first network node and the second network node, the request message comprising an indicator that requests an alignment of a DRX configuration associated with the second network node and a DRX configuration associated with the first network node, wherein the alignment indicates that (i) a cycle length of the DRX configuration associated with the second network node matches a cycle length of the DRX configuration associated with the first network node and (ii) an on-duration of the DRX configuration associated with the first network node is greater than, and entirely contains, an on-duration of the DRX configuration associated with the second network node.
15. The method of claim 14, wherein the cycle length of the DRX configuration associated with the second network node is a DRX long cycle.
16. The method of claim 14, wherein the processor is further configured to:
modify the DRX configuration based on the request message.
17. The method of claim 14, wherein the first network node is a master node and the second network node is a secondary node.

18. The method of claim 14, wherein the request message comprises an inter-node Radio Resource Configuration (RRC) message container CG-ConfigInfo.