

ADAPTIVE PARAMETER CONFIGURATION IN WIRELESS COMMUNICATION

TECHNICAL FIELD

This patent document generally relates to systems, devices, and techniques for wireless communications.

BACKGROUND

Wireless communication technologies are moving the world toward an increasingly connected and networked society. The rapid growth of wireless communications and advances in technology has 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. In comparison with the existing wireless networks, next generation systems and wireless communication techniques need to provide support for an increased number of users and devices.

SUMMARY

This document relates to methods, systems, and devices for adaptive parameter configuration in wireless communication. The disclosed technology describes methods that can be implemented at a plurality of mobile devices (or terminals, or user equipment) or a plurality of networks (such as a base station, gNodeB) to prevent or reduce unnecessary power consumptions.

In a first aspect, the present disclosure provides a wireless communication method, comprising: receiving, by a user device, a message that includes an indication related to a discontinuous reception (DRX) cycle of the user device; and configuring the user device to operate based on the indication, wherein the receiving of the message provides information on whether a timer related to the DRX cycle starts after a time offset, wherein the time offset is not less than a bandwidth part (BWP) switching time, and wherein the time offset is related to a capability of the user device.

In a second aspect, the present disclosure provides a wireless communication method, comprising: transmitting, by a network device, to a user device, a message that includes an

indication related to a discontinuous reception (DRX) cycle of the user device, wherein the message provides information on whether a timer related to the DRX cycle starts after a time offset, wherein the time offset is not less than a bandwidth part (BWP) switching time, and wherein the time offset is related to a capability of the user device.

In a third aspect, the present disclosure provides a wireless communication method, comprising: monitoring whether a message that includes an indication related to a discontinuous reception (DRX) cycle of a user device has been detected; and upon a result of the monitoring indicating that the indication has not been detected, starting a timer related to the discontinuous reception (DRX) cycle after a time offset, wherein the time offset is not less than a bandwidth part (BWP) switching time and the time offset is related to a capability of the user device.

In one embodiment, a wireless communication method is provided to comprise: a wireless communication method is provided to comprise updating configuration parameters of a user device based on one or more messages including at least one of a parameter update indication, a parameter update inquiry, a parameter set, or a parameter index set.

In another embodiment, a wireless communication apparatus comprising a processor configured to perform the disclosed methods is disclosed.

In another embodiment, a computer readable medium having code stored thereon is disclosed. The code, when implemented by a processor, causes the processor to implement a method described in the present document.

CLAIMS

1. A wireless communication method, comprising:
receiving, by a user device, a message that includes an indication related to a discontinuous reception (DRX) cycle of the user device; and
configuring the user device to operate based on the indication,
wherein the receiving of the message provides information on whether a timer related to the DRX cycle starts after a time offset,
wherein the time offset is not less than a bandwidth part (BWP) switching time, and
wherein the time offset is related to a capability of the user device.
2. The wireless communication method of claim 1, wherein the message is received through a Layer 1 signaling in a physical downlink control channel (PDCCH) transmission.
3. The wireless communication method of claim 2, wherein the PDCCH transmission is received in a primary cell.
4. The wireless communication method of claim 2, wherein the Layer 1 signaling is specific for a certain group of user devices and wherein a size of the certain group is configured based on the message.
5. The wireless communication method of claim 2, wherein the timer starts after the time offset responsive to not receiving the PDCCH transmission.
6. A wireless communication method, comprising:
transmitting, by a network device, to a user device, a message that includes an indication related to a discontinuous reception (DRX) cycle of the user device,
wherein the message provides information on whether a timer related to the DRX cycle starts after a time offset,
wherein the time offset is not less than a bandwidth part (BWP) switching time, and

wherein the time offset is related to a capability of the user device.

7. The wireless communication method of claim 6, wherein the message is transmitted through a Layer 1 signaling in a physical downlink control channel (PDCCH) transmission.
8. The wireless communication method of claim 7, wherein the PDCCH transmission is received in a primary cell.

9. The wireless communication method of claim 7, wherein the Layer 1 signaling is specific for a certain group of user devices and a size of the certain group of user devices is configured based on the message.
10. The wireless communication method of claim 7, wherein the timer starts after the time offset responsive to not transmitting the PDCCH transmission.
11. A wireless communication method, comprising:
 - monitoring whether a message that includes an indication related to a discontinuous reception (DRX) cycle of a user device has been detected; and
 - upon a result of the monitoring indicating that the indication has not been detected, starting a timer related to the discontinuous reception (DRX) cycle after a time offset,
 - wherein the time offset is not less than a bandwidth part (BWP) switching time and the time offset is related to a capability of the user device.
12. The method of claim 11, wherein the message is transmitted in a physical downlink control channel (PDCCH) transmission.
13. The method of claim 11, wherein the timer corresponds to a drx-onDurationTimer.