CLAIMS

[Claim 1] A communication method, comprising:

receiving, by a terminal device, first indication information, wherein the first indication information indicates the terminal device to notify a network when the terminal device is about to leave a satellite service range;

determining, by the terminal device, that the terminal device is about to leave the satellite service range; and

sending, by the terminal device, second indication information, wherein the second indication information indicates that the terminal device is about to leave the satellite service range or is used to request to use a power saving mode, wherein

the terminal device accesses the network through a satellite, and cannot access the network through the satellite within first duration after the terminal device leaves the satellite service range.

[Claim 2] The method according to claim 1, wherein the determining, by the terminal device, that the terminal device is about to leave the satellite service range comprises:

determining, by the terminal device based on location information of the terminal device, that the terminal device is about to leave the satellite service range.

[Claim 3] The method according to claim 1 or 2, wherein the receiving, by a terminal device, first indication information comprises:

receiving, by the terminal device, the first indication information from an access network device.

[Claim 4] The method according to any one of claims 1 to 3, wherein before the determining, by the terminal device, that the terminal device is about to leave the satellite service range, the method further comprises:

entering, by the terminal device, an idle state or a suspended state.

[Claim 5] The method according to claim 1 or 2, wherein the receiving, by a terminal device, first indication information comprises:

receiving, by the terminal device, the first indication information from a mobility management function network element.

[Claim 6] The method according to any one of claims 1 to 5, wherein the first indication information is carried in a registration response message.

[Claim 7] The method according to any one of claims 1 to 6, wherein the sending, by the terminal device, second indication information comprises:

sending, by the terminal device, the second indication information to the access network

device and/or the mobility management function network element.

[Claim 8] A communication method, comprising:

sending, by an access network device, first indication information to a terminal device, wherein the first indication information indicates the terminal device to notify a network when the terminal device is about to leave a satellite service range; and

receiving, by the access network device, second indication information from the terminal device, wherein the second indication information indicates that the terminal device is about to leave the satellite service range or is used to request to use a power saving mode, wherein

the terminal device accesses the network through a satellite, and cannot access the network through the satellite within first duration after the terminal device leaves the satellite service range.

[Claim 9] The method according to claim 8, wherein the method further comprises:

sending, by the access network device, the second indication information to a mobility management function network element, wherein the second indication information indicates that the terminal device is about to leave the satellite service range or indicates the terminal device to request to use the power saving mode.

[Claim 10] The method according to claim 8 or 9, wherein the first indication information is carried in a first message, and the first message further comprises at least one of the following information:

service range assistance information, service range determining periodicity information, or suspension indication information, wherein

the first message indicates the terminal device to release an access network AN connection, the service range assistance information is used to assist the terminal device in determining whether the terminal device is about to leave the satellite service range, the service range determining periodicity information indicates a periodicity in which the terminal device determines whether the terminal device is about to leave the satellite service range, and the suspension indication information indicates the terminal device to enter the suspended state.

[Claim 11] The method according to any one of claims 8 to 10, wherein before the sending, by an access network device, first indication information to a terminal device, the method further comprises:

determining, by the access network device, that the terminal device is in the satellite service range and the terminal device is inactive; or

determining, by the access network device, that the terminal device is in the satellite service range, and receiving information indicating that the terminal device needs to release the AN connection.

[Claim 12] The method according to any one of claims 8 to 11, wherein before the sending,

by an access network device, first indication information to a terminal device, the method further comprises:

receiving, by the access network device, fourth indication information from the mobility management function network element, wherein the fourth indication information indicates the access network device to request the terminal device to notify the network when the terminal device is about to leave the satellite service range.

[Claim 13] A communication method, comprising:

sending, by a mobility management function network element, first indication information to a terminal device, wherein the first indication information indicates the terminal device to notify a network when the terminal device is about to leave a satellite service range; and

receiving, by the mobility management function network element, second indication information from the terminal device, wherein the second indication information indicates that the terminal device is about to leave the satellite service range or indicates the terminal device to request to use a power saving mode, wherein

the terminal device accesses the network through a satellite, and cannot access the network through the satellite within first duration after the terminal device leaves the satellite service range.

[Claim 14] The method according to claim 13, wherein the first indication information is carried in a second message, and the second message further comprises service range assistance information and/or service range determining periodicity information, wherein

the service range assistance information is used to assist the terminal device in determining whether the terminal device is about to leave the satellite service range, and the service range determining periodicity information indicates a periodicity in which the terminal device determines whether the terminal device is about to leave the satellite service range.

[Claim 15] The method according to claim 13 or 14, wherein the method further comprises:

sending, by the mobility management function network element, fourth indication information to an access network device, wherein the fourth indication information indicates the access network device to request the terminal device to notify the network when the terminal device is about to leave the satellite service range.

[Claim 16] A communication method, comprising:

sending, by a mobility management function network element, first indication information to an access network device, wherein the first indication information indicates the terminal device to notify a network when the terminal device is about to leave a satellite service range;

receiving, by the access network device, the first indication information, and sending second indication information to the mobility management function network element, wherein the second indication information indicates that the terminal device is about to leave the satellite service range

or indicates the terminal device to request to use a power saving mode; and

receiving, by the mobility management function network element, the second indication information from the access network device.

[Claim 17] A communication apparatus, comprising a processor, wherein the processor is coupled to a memory, the memory is configured to store a computer program or instructions, and the processor is configured to execute the computer program or the instructions in the memory, to enable the apparatus to perform the method according to any one of claims 1 to 15.

[Claim 18] A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program or instructions, and when the computer program or the instructions are run on a computer, the computer is enabled to perform the method according to any one of claims 1 to 15.

[Claim 19] A computer program product, wherein when the computer program product is run on a computer, the computer is enabled to perform the method according to any one of claims 1 to 15.

[Claim 20] A communication system, comprising a mobility management function network element and an access network device, wherein

the mobility management function network element is configured to send first indication information to the access network device, wherein the first indication information indicates a terminal device to notify a network when the terminal device is about to leave a satellite service range;

the access network device is configured to receive the first indication information, and send the first indication information to the terminal device;

the access network device is further configured to receive second indication information from the terminal device, and send the second indication information to the mobility management function network element, wherein the second indication information indicates that the terminal device is about to leave the satellite service range or indicates the terminal device to request to use a power saving mode; and

the mobility management function network element is configured to receive the second indication information from the access network device.