WHAT IS CLAIMED IS:

1. A method for transmitting assistance information, performed by a network device, comprising:

sending indication information to a user equipment, wherein the indication information is configured to instruct the user equipment to report the assistance information of a target moment, the indication information indicates contents of the assistance information, and the target moment comprises at least one of a current moment or a future moment; and

receiving the assistance information reported by the user equipment.

2. The method of claim 1, further comprising at least one of:

sending second indication information to the user equipment, wherein the second indication information is configured to indicate at least one, corresponding to the target moment, of a first moment, a first duration or a time interval; or

sending third indication information to the user equipment, wherein the third indication information is configured to indicate at least one, corresponding to the target moment, of a second moment, a quantity or a periodic time interval.

3. The method of claim 1, wherein the current moment is a moment when the user equipment receives the indication information or a moment specified by a protocol.

4. The method of any one of claims 1 to 3, further comprising:

sending fourth indication information to the user equipment, wherein the fourth indication information is configured to indicate the target moment.

5. The method of claim 4, wherein,

the fourth indication information is configured to indicate a second duration, wherein the target moment is an ending moment of the second duration by taking the current moment as a starting moment; or

the fourth indication information is configured to indicate absolute time information corresponding to the target moment.

6. The method of any one of claims 1 to 5, wherein the contents of the assistance information comprise at least one of:

location information of the user equipment, a distance between the user equipment

and a service satellite, a signal transmission delay between the user equipment and a satellite, a distance difference, or a delay difference;

wherein the distance difference is a difference between a first distance and a second distance, the first distance is the distance between the user equipment and the service satellite, and the second distance is a distance between the user equipment and a satellite of a neighbor cell; and

wherein the delay difference is a difference between a first delay and a second delay, the first delay is the signal transmission delay between the user equipment and the service satellite, and the second delay is a signal transmission delay between the user equipment and the satellite of the neighbor cell.

7. The method of any one of claims 1 to 6, wherein sending the indication information to the user equipment comprises:

sending broadcast information to the user equipment, wherein the broadcast information comprises the indication information; or,

sending a dedicated signaling to the user equipment, wherein the dedicated signaling comprises the indication information.

8. The method of any one of claims 1 to 7, further comprising:

updating measurement configuration information based on the assistance information, wherein the measurement configuration information comprises at least one of: Synchronization Signal Block-Measurement Timing Configuration (SMTC) or a measurement gap.

9. The method of claim 8, wherein updating the measurement configuration information based on the assistance information of the target moment comprises at least one of:

updating the measurement configuration information at the target moment based on the assistance information of the target moment;

configuring, based on the assistance information of the target moment, at least one of an offset, a period or a duration for the SMTC of different target moments; or

configuring, based on the assistance information of the target moment, at least one of an offset, a period or a duration for the measurement gap of different target moments.

10. A method for transmitting assistance information, performed by a user equipment, comprising:

receiving indication information from a network device, wherein the indication information is configured to instruct the user equipment to report the assistance information of a target moment, the indication information indicates contents of the assistance information, and the target moment comprises at least one of a current moment or a future moment;

determining the assistance information; and

reporting the assistance information.

11. The method of claim 10, further comprising at least one of:

receiving second indication information from the network device, wherein the second indication information is configured to indicate at least one, corresponding to the target moment, of a first moment, a first duration or a time interval; or

receiving third indication information from the network device, wherein the third indication information is configured to indicate at least one, corresponding to the target moment, of a second moment, a quantity or a periodic time interval.

12. The method of claim 10, wherein the assistance information is configured for the network device to update measurement configuration information based on the assistance information, wherein the measurement configuration information comprises at least one of: Synchronization Signal Block-Measurement Timing Configuration (SMTC) or a measurement gap.

13. The method of claim 11 or 12, wherein the current moment is a moment when the user equipment receives the indication information or a moment specified by a protocol.

14. The method of any one of claims 10 to 13, further comprising:

receiving fourth indication information from the network device, wherein the fourth indication information is configured to indicate the target moment.

15. The method of claim 14, further comprising: determining the target moment based on the fourth indication information; wherein,

the fourth indication information is configured to indicate a second duration,

wherein the target moment is an ending moment of the second duration by taking the current moment as a starting moment; or,

the fourth indication information is configured to indicate absolute time information corresponding to the target moment.

16. The method of any one of claims 10 to 15, wherein contents of the assistance information comprise at least one of:

location information of the user equipment, a distance between the user equipment and a service satellite, a signal transmission delay between the user equipment and a satellite, a distance difference, or a delay difference;

wherein the distance difference is a difference between a first distance and a second distance, the first distance is the distance between the user equipment and the service satellite, and the second distance is a distance between the user equipment and a satellite of a neighbor cell; and

wherein the delay difference is a difference between a first delay and a second delay, the first delay is the signal transmission delay between the user equipment and the service satellite, and the second delay is a signal transmission delay between the user equipment and the satellite of the neighbor cell.

17. The method of any one of claims 10 to 16, wherein determining the assistance information of the target moment comprises:

in response to the target moment being the current moment, determining the assistance information of the current moment based on location information of the user equipment at the current moment and location information of a service satellite at the current moment; or

in response to the target moment being the future moment, determining the assistance information of the target moment based on location information of the user equipment at the current moment and location information of a service satellite at the target moment; or

in response to the target moment being the future moment, determining the assistance information of the target moment based on location information of the user equipment at the target moment and location information of a service satellite at the target

moment.

18. The method of any one of claims 10 to 17, wherein receiving the indication information from the network device comprises:

receiving broadcast information from the network device, wherein the broadcast message comprises the indication information; or,

receiving a dedicated signaling from the network device, wherein the dedicated signaling comprises the indication information.

19. A communication device, comprising a processor; and

a memory storing a computer program;

wherein the processor is configured to execute the computer program to perform the method of any one of claims 1 to 9.

20. A communication device, comprising a processor; and

a memory storing a computer program;

wherein the processor is configured to execute the computer program to perform the method of any one of claims 10 to 18.