CLAIMS:

1. User equipment comprising:
at least one processor; and
at least one memory storing instructions that, when executed by the at least one processor, cause the user equipment at least to perform:
receiving, from a serving cell, a configuration message for a handover to a target cell associated with a satellite assistance information, wherein the configuration message is indicative of at least:
the satellite assistance information associated with the target cell; and
a validity timer for defining validity of at least part of the satellite assistance information;
wherein the satellite assistance information comprises an epoch time and an ephemeris, wherein the satellite assistance information is to be applied after reaching the epoch time, wherein the validity timer defines how long the satellite assistance information is valid from the epoch time;
starting, based on at least the epoch time, a handover timer.

2. The user equipment of claim 1, caused to perform:
determining that the epoch time is a time point in the past; and
based on the determining that the epoch time is the time point in the past, determining whether the satellite assistance information is valid.

3. The user equipment of claim 2, caused to perform:
detecting that the satellite assistance information is not valid;
based on detecting that the satellite assistance information is not valid, receiving updated satellite assistance information with a second epoch time; and
starting the handover timer at the second epoch time.

4. The user equipment of claim 2 or 3, caused to perform:
detecting that the satellite assistance information is not valid;
based on detecting that the satellite assistance information is not valid, receiving updated satellite assistance information with a second epoch time; and

modifying one or more requirements on handover completion by:

relaxing a handover delay requirement and/or interruption time requirement; and/or

modifying a starting time of measurement of a handover delay and/or an interruption time.

5. The user equipment of claim 3 or 4, caused to perform:
initiating a random access procedure with the target cell using a resource allocated in the configuration, which is a later resource in time than a first resource, which is the earliest resource in time of the allocated resources.

6. The user equipment of claim 2, caused to perform:
detecting that the satellite assistance information is valid;
based on detecting that the satellite assistance information is valid, starting the handover timer at the end of processing the configuration message.

7. The user equipment of claim 1, caused to perform:
determining that the epoch time is a time point between a starting time of processing of the configuration message and the end of a processing delay of the configuration message;
based on determining that the epoch time is the time point between the starting time of processing of the configuration message and the end of the processing delay of the configuration message, detecting that the satellite assistance information is valid; and
starting the handover timer at the end of processing the configuration message or at the end of the processing delay of the configuration message.

8. The user equipment of claim 1, caused to perform:
determining that the epoch time is a time point after the end of a processing delay of the configuration message;
based on determining that the epoch time is the time point after the end of the processing delay of the configuration message, starting the handover timer at the epoch time.

9. The user equipment of claim 1 or 8, caused to perform:
determining that the epoch time is a time point after the end of a processing delay of the configuration message;

based on determining that the epoch time is the time point after the end of the processing delay of the configuration message, modifying one or more requirements on handover completion by:

relaxing a handover delay requirement and/or interruption time requirement; and/or

modifying a starting time of measurement of a handover delay and/or an interruption time.

10. The user equipment of claim 4 or 9, wherein the relaxing the handover delay requirement comprises adding a time value to the handover delay requirement; and/or wherein the relaxing the interruption time requirement comprises adding a time value to the interruption time requirement.

11. The user equipment of any of the claims 7 to 10, caused to perform:
initiating a random access procedure with the target cell using a first resource allocated in the configuration, wherein the first resource is the earliest available resource in time of the allocated resource(s).

12. The user equipment of any preceding claim, wherein the configuration message is indicative of random access channel configuration comprising a first resource and a second resource, which is later resource in time than the first resource.

13. An access node of a serving cell for user equipment, comprising:
at least one processor; and
at least one memory storing instructions that, when executed by the at least one processor, cause the access node at least to perform:
receiving, from a target cell, an acknowledgement for a handover request, wherein the acknowledgement is indicative of at least:

a random access channel configuration comprising a first resource and optionally a second resource, which is later resource in time than the first resource;

a satellite assistance information associated with the target cell; and

a validity timer for defining validity of at least part of the satellite assistance information;

wherein the satellite assistance information comprises an epoch time and an ephemeris, wherein the satellite assistance information is to be applied after reaching the epoch time, wherein the validity timer defines how long the satellite assistance information is valid from the epoch time;

transmitting, to a user equipment served by the access node, a configuration message for a handover to the target cell, wherein the configuration message is indicative of at least: the random access channel configuration; the satellite assistance information; and the validity timer.

14. A method performed by a user equipment comprising:

receiving, by the user equipment from an access node of a serving cell, a configuration message for a handover to a target cell associated with a satellite assistance information, wherein the configuration message is indicative of at least:

the satellite assistance information associated with the target cell; and

a validity timer for defining validity of at least part of the satellite assistance information;

wherein the satellite assistance information comprises an epoch time and an ephemeris, wherein the satellite assistance information is to be applied after reaching the epoch time, wherein the validity timer defines how long the satellite assistance information is valid from the epoch time;

starting, by the user equipment based on at least the epoch time, a handover timer.

15. The method of claim 14, comprising:

determining that the epoch time is a time point in the past; and

based on the determining that the epoch time is the time point in the past, determining whether the satellite assistance information is valid.

16. The method of claim 15, comprising:

detecting that the satellite assistance information is not valid;

based on detecting that the satellite assistance information is not valid, receiving updated satellite assistance information with a second epoch time; and

starting the handover timer at the second epoch time.

17. The method of claim 15 or 16, comprising:

detecting that the satellite assistance information is not valid;

based on detecting that the satellite assistance information is not valid, receiving updated satellite assistance information with a second epoch time; and

modifying one or more requirements on handover completion by:

relaxing a handover delay requirement and/or interruption time requirement; and/or

modifying a starting time of measurement of a handover delay and/or an interruption time.

18. The method of claim 16 or 17, comprising:

initiating a random access procedure with the target cell using a resource allocated in the configuration, which is a later resource in time than a first resource, which is the earliest resource in time of the allocated resources.

19. The method of claim 15, comprising:

detecting that the satellite assistance information is valid;

based on detecting that the satellite assistance information is valid, starting the handover timer at the end of processing the configuration message.

20. The method of claim 14, comprising:

determining that the epoch time is a time point between a starting time of processing of the configuration message and the end of a processing delay of the configuration message;

based on determining that the epoch time is the time point between the starting time of processing of the configuration message and the end of the processing delay of the configuration message, detecting that the satellite assistance information is valid; and

starting the handover timer at the end of processing the configuration message or at the end of the processing delay of the configuration message.

21. The method of claim 14, comprising:

determining that the epoch time is a time point after the end of a processing delay of the configuration message;

based on determining that the epoch time is the time point after the end of the processing delay of the configuration message

starting the handover timer at the epoch time.

22. The method of claim 14 or 21, comprising:

determining that the epoch time is a time point after the end of a processing delay of the configuration message;

based on determining that the epoch time is the time point after the end of the processing delay of the configuration message, modifying one or more requirements on handover completion by:

relaxing a handover delay requirement and/or interruption time requirement; and/or

modifying a starting time of measurement of a handover delay and/or an interruption time.

23. The method of claim 17 or 22, wherein the relaxing the handover delay requirement comprises adding a time value to the handover delay requirement; and/or wherein the relaxing the interruption time requirement comprises adding a time value to the interruption time requirement.

24. The method of any of the claims 20 to 23, comprising:

initiating a random access procedure with the target cell using a first resource allocated in the configuration, wherein the first resource is the earliest available resource in time of the allocated resource(s).

25. The method of any preceding claim 14 to 24, wherein the configuration message is indicative of random access channel configuration comprising a first resource and a second resource, which is later resource in time than the first resource.

26. A computer program comprising instruction, which, when executed by a processor of a user equipment, cause the user equipment to perform at least:

receiving, from an access node of a serving cell, a configuration message for a handover to a target cell associated with a satellite assistance information, wherein the configuration message is indicative of at least:

the satellite assistance information associated with the target cell; and

a validity timer for defining validity of at least part of the satellite assistance information;

wherein the satellite assistance information comprises an epoch time and an ephemeris, wherein the satellite assistance information is to be applied after reaching the epoch time, wherein the validity timer defines how long the satellite assistance information is valid from the epoch time;

starting, based on at least the epoch time, a handover timer.