CLAIMS

What is claimed is:

1. A method for managing communication in a wireless communication system, comprising:

identifying one or more forwarded packets associated with a handoff procedure;

identifying one or more indicators that facilitate lossless communication of packets with mitigated delay subsequent to the forwarded packets; and

communicating respective packets subsequent to the forwarded packets based on the identified indicators to facilitate lossless reception of the packets with mitigated delay.

2. The method of claim 1, wherein the identifying one or more indicators comprises receiving an indication of a sequence number to be utilized for communication of an initial packet and the communicating comprises:

assigning sequence numbers of respective packets in sequence beginning with an initial sequence number chosen based on the received indication; and

communicating the packets in sequence according to the assigned sequence numbers.

3. The method of claim 2, wherein the indication of the sequence number to be utilized for communication of an initial packet is a sequence number last used for communication of a packet.

4. The method of claim 2, wherein the indication of the sequence number to be utilized for communication of an initial packet is a next available sequence number for communication of a packet.

5. The method of claim 2, wherein the identifying one or more indicators comprises receiving a sequence number to be utilized for communication of an initial packet from a Node B over a network interface.

6. The method of claim 2, wherein the identifying one or more indicators comprises receiving a sequence number to be utilized for communication of an initial packet from a serving gateway (SGW) over a network interface.

7. The method of claim 1, wherein the identifying one or more indicators comprises configuring a jump value to be applied to respective packets, and the communicating comprises:

assigning sequence numbers of respective packets in sequence beginning with a last-known sequence number of a forwarded packet plus the configured jump value; and

communicating the respective packets in sequence according to the assigned sequence numbers.

8. The method of claim 7, wherein the communicating further comprises communicating the configured jump value.

9. The method of claim 7, wherein the communicating further comprises communicating an indication that the configured jump value has been applied to respectively communicated packets.

10. The method of claim 7, wherein the communicating further comprises:

identifying a final forwarded packet associated with the handoff procedure; and

communicating an indication that communication of forwarded packets has ended following communication of the final forwarded packet to allow delivery of respective subsequent packets with mitigated delay up to an indicated sequence number notwithstanding discontinuity between a sequence number of the final forwarded packet and a sequence number of a first subsequent packet.

11. The method of claim 1, wherein the identifying one or more indicators comprises receiving a reset command communicated in connection with the handoff procedure, and the communicating comprises:

assigning sequence numbers of respective packets in sequence beginning with a predetermined reset value;

communicating an indication of the reset command; and

communicating the packets in sequence according to the assigned sequence numbers.

12. The method of claim 11, wherein the communicating further comprises relaying the reset command.

13. The method of claim 11, wherein the communicating an indication of the reset command comprises communicating a handover command to facilitate implicit identification of the reset command based on a utilized radio bearer.

14. The method of claim 1, wherein respective non-forwarded packets are communicated over an S1 interface.

15. The method of claim 1, wherein the communicating comprises communicating one or more Packet Data Convergence Protocol (PDCP) Service Data Units (SDUs).

16. A wireless communications apparatus, comprising:

a memory that stores data relating to at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus and at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service without unaccounted sequence gaps in the at least one data unit; and

a processor configured to deliver the at least one data unit based on the at least one indicator.

17. The wireless communications apparatus of claim 16, wherein the memory further stores data relating to an initial sequence number and the processor is further configured to deliver an initial data unit using the initial sequence number and to deliver respective subsequent data units using respective successive sequence numbers.

18. The wireless communications apparatus of claim 17, wherein the processor is further configured to identify a sequence number last used for

communication of a data unit and to store a sequence number following the received sequence number as the initial sequence number.

19. The wireless communications apparatus of claim 17, wherein the processor is configured to identify a next available sequence number for communication of a data unit and to store the next available sequence number as the initial sequence number.

20. The wireless communications apparatus of claim 17, wherein the processor is further configured to receive sequence number information from an access point over an X2 interface and to determine the initial sequence number based on the received sequence number information.

21. The wireless communications apparatus of claim 17, wherein the processor is further configured to receive sequence number information from a serving gateway (SGW) over an S1 interface and to determine the initial sequence number based on the received sequence number information.

22. The wireless communications apparatus of claim 16, wherein the memory further stores data relating to a step value to be applied to an initial data unit and the processor is further configured to add the step value to a last-known sequence number to obtain an initial sequence number, to assign the initial sequence number to a data unit, and to deliver the data unit using the initial sequence number.

23. The wireless communications apparatus of claim 22, wherein the processor is further configured to communicate the step value.

24. The wireless communications apparatus of claim 22, wherein the processor is further configured to provide an indication that a step value has been applied to a communicated data unit.

25. The wireless communications apparatus of claim 16, wherein the memory further stores data relating to a reset command and a predetermined sequence

number associated therewith and the processor is further configured to deliver an initial data unit in a sequence of data units using the predetermined sequence number associated with the reset command and to deliver respective subsequent data units in the sequence using respective successive sequence numbers.

26. The wireless communications apparatus of claim 25, wherein the processor is further configured to relay the reset command.

27. The wireless communications apparatus of claim 16, wherein the processor is further configured to deliver respective data units using Packet Data Convergence Protocol (PDCP).

28. An apparatus that facilitates continuous sequencing of packets for transmission through a handoff, the apparatus comprising:

means for receiving one or more selectively forwarded packets for communication in connection with a handoff;

means for identifying state information and order information associated with the packets that facilitate lossless delivery of the packets; and

means for transmitting respective packets subsequent to the selectively forwarded packets using the state information in an order specified by the order information.

29. A computer program product, comprising:

a computer-readable medium comprising:

code for identifying one or more Packet Data Convergence Protocol (PDCP) packets to be communicated;

code for identifying information relating to the one or more PDCP packets, the information comprising at least one of a last known sequence number used for communication, a next available sequence number for communication, a sequence step size to be applied to the one or more PDCP packets, or a reset command;

code for setting respective sequence numbers of one or more PDCP packets received subsequent to the identified PDCP packets based at least in part

on the identified information to facilitate continuity of sequence between one or more PDCP packets previously communicated and the one or more subsequently received PDCP packets; and

code for relaying the one or more subsequently received PDCP packets using the respectively set sequence numbers.

30. An integrated circuit that executes computer-executable instructions for coordinating data delivery through a handover operation, the instructions comprising:

receiving at least one selectively forwarded Service Data Unit (SDU);

identifying at least one of sequence number information or a reset command;

receiving at least one subsequent SDU; and

associating respective sequence numbers with respective subsequent SDUs to facilitate lossless delivery of the subsequent SDUs and to maintain continuity between one or more SDUs previously communicated and the subsequent SDUs based on at least one of identified sequence number information or an identified reset command.

31. A method for processing packets received during a handoff operation, comprising:

receiving at least one packet from a first Node B;

identifying information associated with a handoff from the first Node B to a second Node B; and

receiving at least one packet from the second Node B in a continuous manner from the at least one packet received from the first Node B based on the identified information.

32. The method of claim 31, wherein:

the receiving at least one packet from a first Node B comprises identifying a sequence number associated with a final packet received from the first Node B;

the identifying comprises identifying a step value for sequence numbers utilized in connection with the handoff from the first Node B to the second Node B; and

the receiving at least one packet from the second Node B comprises receiving a packet from the second Node B having a sequence number associated thereto based on

the identified step value and processing the packet without requiring a delay for detecting additional packets.

33. The method of claim 32, wherein the step value is known prior to the handoff from the first Node B to the second Node B.

34. The method of claim 32, wherein the identifying comprises receiving the step value from the second Node B during the handoff.

35. The method of claim 32, wherein the identifying comprises receiving an indication of a step in sequence numbers for respective packets from the second Node B during the handoff.

36. The method of claim 31, wherein:

the identifying comprises receiving a reset indication; and

the receiving at least one packet from the second Node B comprises receiving a packet from the second Node B having a sequence number equal to a predetermined reset sequence number and processing the packet without requiring a delay for detecting additional packets.

37. The method of claim 36, wherein the identifying comprises receiving the reset indication from the first Node B.

38. The method of claim 36, wherein the identifying comprises receiving the reset indication from the second Node B.

39. The method of claim 36, wherein the identifying comprises:

receiving a handover indication; and

identifying an implicitly provided reset indication based on the handover indication and at least one radio bearer associated with the handoff.

40. The method of claim 31, wherein respective received packets comprise Packet Data Convergence Protocol (PDCP) Service Data Units (SDUs).

41. A wireless communications apparatus, comprising:

a memory that stores data relating to respective data units received from a first base station, respective sequence numbers associated with the data units received from the first base station, and information relating to a handover from the first base station to a second base station; and

a processor configured to receive at least one data unit from the second base station based on the information relating to the handover without requiring a delay for attempting to detect additional data units.

42. The wireless communications apparatus of claim 41, wherein the information relating to the handover stored by the memory comprises data relating to a jump in respective sequence numbers associated with data units received from the second base station as compared to data units received from the first base station.

43. The wireless communications apparatus of claim 42, wherein the processor is further configured to obtain the data relating to the jump in sequence numbers from the second base station.

44. The wireless communications apparatus of claim 42, wherein the processor is further configured to receive signaling from the second base station indicating that communication of data units from the first base station has completed and to process subsequently received data units without requiring a delay for attempting to detect additional data units notwithstanding discontinuity in sequence numbers therebetween until a data unit having a predetermined sequence number is received.

45. The wireless communications apparatus of claim 41, wherein the memory further stores data relating to a reset command and the processor is further configured to attempt to detect a data unit from the second base station having a sequence number equal to a predetermined reset value and to process the data unit upon detection thereof without requiring a delay for attempting to detect additional data units.

46. The wireless communications apparatus of claim 45, wherein the processor is further configured to receive the reset command from one or more of the first base station or the second base station.

47. The wireless communications apparatus of claim 45, wherein the processor is further configured to identify an implicit reset command based on a handover command communicated by a base station and one or more radio bearers utilized by the wireless communications apparatus.

48. An apparatus that facilitates substantially uninterrupted data communication and processing during a communication handover, the apparatus comprising:

means for receiving one or more data units from a first source;

means for identifying information relating to a change in service from the first source to a second source;

means for receiving one or more data units from the second source based on the identified information; and

means for processing data units received from the second source without delay associated with attempting to detect additional data units.

49. A computer program product, comprising:

a computer-readable medium comprising:

code for identifying at least one packet obtained from a first data source;

code for identifying one or more indicators that facilitate maintenance of sequence between the at least one packet obtained from the first data source and at least one packet obtained from a second data source; and

code for receiving at least one packet from the second data source based on the one or more identified indicators in a continuous manner such that sequence of the packets is maintained.

50. An integrated circuit that executes computer-executable instructions for efficiently transitioning from a first access point to a second access point, the instructions comprising:

receiving data from the first access point in a predetermined sequence based on respective sequence numbers associated with the data;

identifying one or more of a sequence jump or a reset command associated with a handover from the first access point to the second access point;

determining an initial sequence number for data communicated by the second access point based on one or more of an identified sequence jump or an identified reset command; and

receiving data from the second access point, wherein the data from the second access point maintains the sequence of the data received from the first access point beginning with the determined initial sequence number.

CLAIMS

1. A method for managing communication in a wireless communication system, comprising:

identifying at least one forwarded packet associated with a handoff procedure;

identifying at least one indicator including a sequence number indication, wherein the at least one indicator is received directly from a source eNodeB at a target eNodeB over an X2 interface;

assigning a sequence number to at least one respective packet without a sequence number beginning with an initial sequence number chosen based on the received sequence number indication;

communicating the at least one respective packet with the assigned sequence number and the at least one forwarded packet to facilitate lossless reception of the at least one respective packet.

2. The method of claim 1, wherein the sequence number indication is a last used sequence number.

3. The method of claim 1, wherein the sequence number indication is a next available sequence number.

4. The method of claim 1, wherein the communicating comprises communicating at least one Packet Data Convergence Protocol (PDCP) Service Data Unit (SDU).

5. The method of claim 1, wherein the at least one forwarded packet is different from the at least one respective packet.

6. A method for managing communication in a wireless communication system, comprising:

identifying at least one forwarded packet associated with a handoff procedure;

identifying at least one indicator including a sequence number, wherein the at least one indicator is received from a source eNodeB over an X2 interface;

assigning the sequence number to at least one respective packet without a sequence number; and

communicating the at least one respective packet with the assigned sequence number and the at least one forwarded packet to facilitate lossless reception of the at least one respective packet.

7. A method for managing communication in a wireless communication system, comprising:

identifying at least one forwarded packet associated with a handoff procedure;

identifying at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

communicating at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein the identifying the at least one indicator comprises receiving a sequence number from a serving gateway (SGW) over a network interface, the sequence number to be utilized for communication of an initial packet.

8. A method for managing communication in a wireless communication system, comprising:

identifying at least one forwarded packet associated with a handoff procedure;

identifying at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB over an X**2** interface; and

communicating at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet,

wherein the identifying the at least one indicator comprises configuring a jump value to be applied to the at least one respective packet, and the communicating comprises:

assigning a sequence number to the at least one respective packet beginning with a last-known sequence number of the at least one forwarded packet plus the configured jump value; and

communicating the at least one respective packet with the assigned sequence number.

9. The method of claim **8**, wherein the communicating further comprises communicating the configured jump value.

10. The method of claim **8**, wherein the communicating further comprises communicating an indication that the configured jump value has been applied to the at least one respective packet.

11. The method of claim **8**, wherein the communicating further comprises:

identifying a final forwarded packet associated with the handoff procedure; and

communicating an indication that communication of the at least one forwarded packet has ended following communication of the final forwarded packet to allow delivery of at least one respective subsequent packet up to an indicated sequence number notwithstanding discontinuity between a sequence number of the final forwarded packet and a sequence number of a first subsequent packet.

12. A method for managing communication in a wireless communication system, comprising:

identifying at least one forwarded packet associated with a handoff procedure;

identifying at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

communicating at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein the identifying the at least one indicator comprises receiving a reset command communicated in connection with the handoff procedure, and

the communicating comprises:

assigning at least one sequence number to the at least one respective packet beginning with a predetermined reset value;

communicating an indication of the reset command; and

communicating the at least one respective packet with the assigned at least one sequence number.

13. The method of claim **12**, wherein the communicating further comprises relaying the reset command.

14. The method of claim **12**, wherein the communicating the indication of the reset command comprises communicating a handover command to facilitate implicit identification of the reset command based on a utilized radio bearer.

15. A method for managing communication in a wireless communication system, comprising:

identifying at least one forwarded packet associated with a handoff procedure;

identifying at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

communicating at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein at least one respective non-forwarded packet is communicated over an S1 interface.

16. A wireless communications apparatus, comprising:

a memory that stores data relating to:

at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus; and

at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly received from a source eNodeB at a target eNodeB over an X2 interface; and

a processor configured to assign a sequence number to the at least one data unit, which is without a sequence number, beginning with an initial sequence number chosen based on the received sequence number information and to deliver the at least one data unit with the assigned sequence number.

17. The wireless communications apparatus of claim **16**, wherein the memory further stores data relating to the initial sequence number and the processor is further configured to deliver respective data units subsequent to the at least one data unit using respective successive sequence numbers subsequent to the initial sequence number.

18. The wireless communications apparatus of claim **17**, wherein the processor is further configured to identify a sequence number last used for communication of a data unit and to store a sequence number following a sequence number, included in the sequence number information, as the initial sequence number.

19. The wireless communications apparatus of claim **17**, wherein the processor is configured to identify a next available sequence number for communication of a next data unit and to store the next available sequence number as the initial sequence number.

20. The wireless communications apparatus of claim **16**, wherein the processor is further configured to deliver respective data units using Packet Data Convergence Protocol (PDCP).

21. A wireless communications apparatus, comprising:

a memory that stores data relating to:

data relating to an initial sequence number;

at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus; and

at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly received from a source eNodeB at a target eNodeB; and

a processor configured to:

determine the initial sequence number based on the received sequence number information;

assign a data unit using the initial sequence number, wherein the initial sequence number is assigned to the data unit without a sequence number;

deliver the data unit with the assigned sequence number; and

deliver respective subsequent data units using respective successive sequence numbers.

22. A wireless communications apparatus, comprising:

a memory that stores data relating to:

data relating to an initial sequence number;

at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus; and

at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB; and

a processor configured to deliver:

the at least one data unit based on the at least one indicator

an initial data unit using the initial sequence number; and

respective subsequent data units using respective successive sequence numbers,

wherein the processor is further configured to receive the sequence number information from a serving gateway (SGW) over an S1 interface and to determine the initial sequence number based on the received sequence number information.

23. A wireless communications apparatus, comprising:

a memory that stores data relating to:

at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB over an X2 interface; and

a processor configured to deliver the at least one data unit based on the at least one indicator,

wherein:

the memory further stores data relating to a step value to be applied to an initial data unit; and

the processor is further configured:

to add the step value to a last-known sequence number to obtain an initial sequence number,

to assign the initial sequence number to an initial data unit, and

to deliver the initial data unit using the initial sequence number.

24. The wireless communications apparatus of claim **23**, wherein the processor is further configured to communicate the step value.

25. The wireless communications apparatus of claim **23**, wherein the processor is further configured to provide an indication that the step value has been applied to a communicated data unit.

26. A wireless communications apparatus, comprising:

a memory that stores data relating to:

at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus; and

at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB; and

a processor configured to deliver the at least one data unit based on the at least one indicator, wherein:

the memory further stores data relating to a reset command and a predetermined sequence number associated with the reset command; and

the processor is further configured:

to deliver an initial data unit in a sequence of data units using the predetermined sequence number associated with the reset command; and

to deliver respective subsequent data units in the sequence using respective successive sequence numbers.

27. The wireless communications apparatus of claim **26**, wherein the processor is further configured to relay the reset command.

28. An apparatus that facilitates sequencing of packets for transmission through a handoff, the apparatus comprising:

means for receiving at least one selectively forwarded packet for communication in connection with a handoff;

means for identifying state information and order information associated with the at least one selectively forwarded packet that facilitate lossless delivery of the packets, at least a portion of the order information including sequence number information received directly from a source eNodeB at a target eNodeB over an X2 interface;

means for assigning sequence numbers to respective packets without sequence numbers beginning with an initial sequence number chosen based on the sequence number indication; and

means for transmitting the respective packets with the assigned sequence numbers and the at least one selectively forwarded packet.

29. A computer program product, comprising a non-transitory computer-readable medium comprising:

code for identifying at least one Packet Data Convergence Protocol (PDCP) packet to be communicated;

code for identifying information relating to the at least one PDCP packet, the information comprising at least one of a last known sequence number used for communication, a next available sequence number for communication, a sequence step size to be applied to the at least one PDCP packet, or a reset command, in which at least a portion of the information including sequence number information is received directly from a source eNodeB at a target eNodeB over an X2 interface;

code for assigning respective sequence numbers of at least one PDCP packet without a sequence number received subsequent to the identified PDCP packets based at least in part on the identified information to facilitate continuity of sequence between at least one PDCP packet

previously communicated and the at least one subsequently received PDCP packet; and

code for relaying the at least one subsequently received PDCP packet using the respectively assigned sequence numbers.

30. An integrated circuit that executes computer-executable instructions, the instructions coordinating data delivery through a handover operation, the instructions comprising:

receiving at least one selectively forwarded Service Data Unit (SDU);

identifying at least one of sequence number information or a reset command, at least a portion of the sequence number information or the reset command being received directly from a source eNodeB at a target eNodeB over an X2 interface;

receiving at least one subsequent SDU; and

associating, by assigning, sequence numbers with each of the subsequent SDUs without sequence numbers to facilitate lossless delivery of the at least one subsequent SDU and to maintain continuity between at least one SDU previously communicated and the at least one subsequent SDU based on at least one of an identified sequence number information or an identified reset command.

31. A method for processing packets received during a handoff operation, comprising:

receiving at least one packet from a first eNodeB;

identifying information associated with a handoff from the first eNodeB to a second eNodeB; and

receiving at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly received from the first eNodeB at the second eNodeB over an X2 interface; and

assigning a sequence number to at least one respective packet without a sequence number beginning with an initial sequence number chosen based on the identified information.

32. The method of claim **31**, wherein respective received packets comprise Packet Data Convergence Protocol (PDCP) Service Data Units (SDUs).

33. A method for processing packets received during a handoff operation, comprising:

receiving at least one packet from a first eNodeB;

identifying information associated with a handoff from the first eNodeB to a second eNodeB; and

receiving at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB over an X**2** interface,

wherein:

the receiving the at least one packet from the first eNodeB comprises identifying a sequence number associated with a final packet received from the first eNodeB;

the identifying the information comprises identifying a step value for sequence numbers utilized in connection with the handoff from the first eNodeB to the second eNodeB; and

the receiving the at least one packet at the second eNodeB comprises receiving the at least one packet at the second eNodeB having a sequence number associated with the at least one packet based on the identified step value and processing the at least one packet without requiring a delay for detecting additional packets.

34. The method of claim **33**, wherein the identifying comprises receiving the step value at the second eNodeB during the handoff.

35. The method of claim **33**, wherein the identifying comprises receiving an indication of a step in sequence numbers for respective packets at the second eNodeB during the handoff.

36. A method for processing packets received during a handoff operation, comprising:

receiving at least one packet from a first eNodeB;

identifying information associated with a handoff from the first eNodeB to a second eNodeB; and

receiving at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB, wherein:

the receiving the at least one packet from the first eNodeB comprises identifying a sequence number associated with a final packet received from the first eNodeB;

the identifying the information comprises identifying a step value for sequence numbers utilized in connection with the handoff from the first eNodeB to the second eNodeB; and

the receiving the at least one packet at the second eNodeB comprises receiving the at least one packet at the second eNodeB having a sequence number associated with the at least one packet based on the identified step value and processing the at least one packet without requiring a delay for detecting additional packets, and wherein the step value is known prior to the handoff from the first eNodeB to the second eNodeB.

37. A method for processing packets received during a handoff operation, comprising:

receiving at least one packet from a first eNodeB;

identifying information associated with a handoff from the first eNodeB to a second eNodeB; and

receiving at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB, wherein:

the identifying comprises receiving a reset indication; and

the receiving the at least one packet at the second eNodeB comprises receiving the at least one packet at the second eNodeB having a sequence number equal to a predetermined reset sequence number and processing the at least one packet without requiring a delay for detecting additional packets.

38. The method of claim **37**, wherein the reset indication is received from the first eNodeB.

39. The method of claim **37**, wherein the reset indication is received at the second eNodeB.

40. A method for processing packets received during a handoff operation, comprising:

receiving at least one packet from a first eNodeB;

identifying information associated with a handoff from the first eNodeB to a second eNodeB; and

receiving at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB, wherein the identifying comprises:

receiving a handover indication; and

identifying an implicitly provided reset indication based on the handover indication and at least one radio bearer associated with the handoff.

41. A wireless communications apparatus, comprising:

a memory that stores data relating to respective data units received from a first base station, respective sequence numbers associated with the data units received directly from the first base station over an X2 interface, and information relating to a handover from the first base station to a second base station; and

a processor configured to receive at least one data unit at the second base station based on the information relating to the handover without requiring a delay for attempting to detect additional data units, wherein the at least data unit is without a sequence number prior to being assigned a sequence number at the second base station based in the information relating to the handover.

42. A wireless communications apparatus, comprising:

a memory that stores data relating to respective data units received from a first base station, respective sequence numbers associated with the data units received directly from the first base station over an X2 interface, and information relating to a handover from the first base station to a second base station; and

a processor configured to receive at least one data unit at the second base station based on the information relating to the handover without requiring a delay for attempting to detect additional data units,

wherein the information relating to the handover stored by the memory comprises data relating to a jump in respective sequence numbers associated with data units received at the second base station.

43. The wireless communications apparatus of claim **42**, wherein the processor is further configured to obtain the data relating to the jump in sequence numbers at the second base station.

44. The wireless communications apparatus of claim **42**, wherein the processor is further configured to receive signaling at the second base station indicating that communication of the at least one data unit from the first base station has completed and to process subsequently received data units without requiring a delay for attempting to detect additional data units notwithstanding discontinuity in sequence numbers until a data unit having a predetermined sequence number is received.

45. A wireless communications apparatus, comprising:

a memory that stores data relating to respective data units received from a first base station, respective sequence numbers associated with the data units received directly from the first base station, and information relating to a handover from the first base station to a second base station; and

a processor configured to receive at least one data unit at the second base station based on the information relating to the handover without requiring a delay for attempting to detect additional data units, wherein the memory further stores data relating to a reset command and the processor is further configured to attempt to detect a predetermined data unit at the second base station having a sequence number equal to a predetermined reset value and to process the predetermined data unit upon detection without requiring a delay for attempting to detect additional data units.

46. The wireless communications apparatus of claim **45**, wherein the processor is further configured to receive the reset command from the first base station.

47. The wireless communications apparatus of claim **45**, wherein the processor is further configured to identify an implicit reset command based on a handover command communicated by the first base station and at least one radio bearer utilized by the wireless communications apparatus.

48. An apparatus that facilitates substantially uninterrupted data communication and processing during a communication handover, the apparatus comprising:

means for receiving at least one data unit from a first base station;

means for identifying information relating to a change in service from the first base station to a second base station;

means for receiving the at least one data unit from the first base station based on the identified information, at least a portion of the identified information including sequence number information received directly from the first base station at the second base station over an X2 interface; and

means for processing data units received at the second base station without delay associated with attempting to detect additional data units, the means for processing data units being configured to assign sequence numbers to the at least one data unit without sequence numbers beginning with an initial sequence number chosen based on the sequence number information.

49. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code for identifying at least one packet obtained from a source base station;

code for identifying at least one indicator that facilitates maintenance of a sequence between the at least one packet obtained from the source base station and at least one packet obtained from a target base station, the at least one indicator including sequence number information directly received from the source base station at the target base station over an X2 interface;

code for assigning a sequence number to the at least one packet from the target base station without a sequence number beginning with an initial sequence number chosen based on the received sequence number information; and

code for transmitting the at least one packet from the target base station with the assigned sequence number.

50. An apparatus for managing communication in a wireless communication system, comprising:

a memory that stores data relating to at least one forwarded packet associated with a handoff procedure received from a first base station, and

at least one processor coupled to the memory and configured:

to identify at least one indicator including a sequence number, wherein the at least one indicator is received at the target eNodeB directly from a source eNodeB over an X2 interface;

to assign a sequence number to at least one respective packet without a sequence number beginning with an initial sequence number chosen based on the received sequence number indication; and

to communicate the at least one respective packet with the assigned sequence number and the at least one forwarded packet to facilitate lossless reception of the at least one respective packet.

51. An apparatus for managing communication in a wireless communication system, comprising:

means for identifying at least one forwarded packet associated with a handoff procedure;

means for identifying at least one indicator including a sequence number indication, wherein the at least one indicator is received at the target eNodeB directly from a source eNodeB over an X2 interface;

means for assigning a sequence number to at least one respective packet without a sequence number beginning with an initial sequence number chosen based on the received sequence number indication; and

means for communicating the at least one respective packet with the assigned sequence number and the at least one forwarded packet to facilitate lossless reception of the at least one respective packet.

52. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to identify at least one forwarded packet associated with a handoff procedure;

code to identify at least one indicator including a sequence number indication, wherein the at least one indicator is forwarded directly from a source eNodeB to a target eNodeB over an X2 interface;

code to assign a sequence number to at least one respective packet without a sequence number beginning with an initial sequence number chosen based on the received sequence number indication; and

code to communicate the at least one respective packet with the assigned sequence number and the at least one forwarded packet to facilitate lossless reception of the at least one respective packet.

53. An apparatus for managing communication in a wireless communication system, comprising:

a memory that stores data relating to at least one forwarded packet associated with a handoff procedure received from a first base station, and

at least one processor coupled to the memory and configured:

to identify at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

to communicate at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein the identifying the at least one indicator comprises receiving a sequence number from a serving gateway (SGW) over a network interface, the sequence number to be utilized for communication of an initial packet.

54. An apparatus for managing communication in a wireless communication system, comprising:

means for identifying at least one forwarded packet associated with a handoff procedure;

means for identifying at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

means for communicating at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein the identifying the at least one indicator comprises means for receiving a sequence number from a serving gateway (SGW) over a network interface, the sequence number to be utilized for communication of an initial packet.

55. A computer program product, comprising:
a non-transitory computer-readable medium comprising:
code to identify at least one forwarded packet associated with a handoff procedure;
code to identify at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and
code to communicate at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein the identifying the at least one indicator comprises code for receiving a sequence number from a serving gateway (SGW) over a network interface, the sequence number to be utilized for communication of an initial packet.

56. An apparatus for managing communication in a wireless communication system, comprising:
a memory that stores data relating to at least one forwarded packet associated with a handoff procedure received from a first base station, and
at least one processor coupled to the memory and configured:
to identify at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and
to communicate at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein the identifying the at least one indicator comprises receiving a reset command communicated in connection with the handoff procedure, and
the communicating comprises:

assigning at least one sequence number to the at least one respective packet beginning with a predetermined reset value;

communicating an indication of the reset command; and

communicating the at least one respective packet with the assigned at least one sequence number.

57. An apparatus for managing communication in a wireless communication system, comprising:

means for identifying at least one forwarded packet associated with a handoff procedure;

means for identifying at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

means for communicating at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein the means for identifying the at least one indicator comprises means for receiving a reset command communicated in connection with the handoff procedure, and

the means for communicating comprises:

means for assigning at least one sequence number to the at least one respective packet beginning with a predetermined reset value;

means for communicating an indication of the reset command; and

means for communicating the at least one respective packet with the assigned at least one sequence number.

58. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to identify at least one forwarded packet associated with a handoff procedure;

code to identify at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

code to communicate at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein the code for identifying the at least one indicator comprises code for receiving a reset command communicated in connection with the handoff procedure, and

the code to communicate comprises:

code to assign at least one sequence number to the at least one respective packet beginning with a predetermined reset value;

code to communicate an indication of the reset command; and

code to communicate the at least one respective packet with the assigned at least one sequence number.

59. An apparatus for managing communication in a wireless communication system, comprising:

a memory that stores data relating to at least one forwarded packet associated with a handoff procedure, and respective data units received from a first base station,

at least one processor coupled to the memory and configured:

to identify at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

to communicate at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless

reception of the at least one respective packet, wherein at least one respective non-forwarded packet is communicated over an S1 interface.

60. An apparatus for managing communication in a wireless communication system, comprising:

means for identifying at least one forwarded packet associated with a handoff procedure;

means for identifying at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

means for communicating at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein at least one respective non-forwarded packet is communicated over an S1 interface.

61. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to identify at least one forwarded packet associated with a handoff procedure;

code to identify at least one indicator, the at least one indicator including sequence number information forwarded directly from a source eNodeB to a target eNodeB; and

code to communicate at least one respective packet subsequent to the at least one forwarded packet based on the at least one identified indicator to facilitate lossless reception of the at least one respective packet, wherein at least one respective non-forwarded packet is communicated over an S1 interface.

62. A method for managing communication in a wireless communication system, comprising:

storing data relating to an initial sequence number;

storing at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

storing at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly received from a source eNodeB at a target eNodeB;

determining the initial sequence number based on the received sequence number information;

assigning sequence numbers to the at least one data unit without sequence numbers beginning with the initial sequence number;

delivering a data unit of the at least one data unit using the initial sequence number; and

delivering respective subsequent data using respective successive sequence numbers.

63. An apparatus for managing communication in a wireless communication system, comprising:

means for storing data relating to an initial sequence number;

means for storing at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

means for storing at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly received from a source eNodeB at a target eNodeB;

means for determining the initial sequence number based on the received sequence number information;

means for assigning sequence numbers to the at least one data unit without sequence numbers beginning with the initial sequence number;

means for delivering a data unit of the at least one data unit with the assigned initial sequence number; and

means for delivering respective subsequent data units with respective successive sequence numbers.

64. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to store data relating to an initial sequence number;

code to store at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

code to store at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly received from a source eNodeB at a target eNodeB;

code to determine the initial sequence number based on the received sequence number information;

code to assign sequence numbers to the at least one data unit without sequence numbers beginning with the initial sequence number;

code to deliver a data unit of the at least one data unit with the assigned initial sequence number; and

code to deliver respective subsequent data units with respective successive sequence numbers.

65. A method for managing communication in a wireless communication system, comprising:

storing data relating to data relating to an initial sequence number;

storing at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

storing at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB;

delivering the at least one data unit based on the at least one indicator;

delivering an initial data unit with the initial sequence number; and

delivering respective subsequent data units with respective successive sequence numbers;

receiving the sequence number information from a serving gateway (SGW) over an S I interface; and

determining the initial sequence number based on the received sequence number information.

66. An apparatus for managing communication in a wireless communication system, comprising:

means for storing data relating to data relating to an initial sequence number;

means for storing at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

means for storing at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB;

means for delivering the at least one data unit based on the at least one indicator;

means for delivering an initial data unit with the initial sequence number;

means for delivering respective subsequent data units with respective successive sequence numbers;

means for receiving the sequence number information from a serving gateway (SGW) over an S1 interface; and

means for determining the initial sequence number based on the received sequence number information.

67. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to store data relating to data relating to an initial sequence number;

code to store at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

code to store at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB;

code to deliver the at least one data unit based on the at least one indicator;

code to deliver an initial data unit with the initial sequence number;

code to deliver respective subsequent data units with respective successive sequence numbers;

code to receive the sequence number information from a serving gateway (SGW) over an S1 interface; and

code to determine the initial sequence number based on the received sequence number information.

68. A method for managing communication in a wireless communication system, comprising:

storing data relating to at least one data unit to be transmitted upon a handover of communication service to the

wireless communications apparatus;

storing data relating to at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB;

storing data relating to a reset command and a predetermined sequence number associated with the reset command;

delivering the at least one data unit based on the at least one indicator;

delivering an initial data unit in a sequence of data units using the predetermined sequence number associated with the reset command; and

delivering respective subsequent data units in the sequence using respective successive sequence numbers.

69. An apparatus for managing communication in a wireless communication system, comprising:

means for storing data relating to at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

means for storing data relating to at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB;

means for storing data relating to a reset command and a predetermined sequence number associated with the reset command;

means for delivering the at least one data unit based on the at least one indicator;

means for delivering an initial data unit in a sequence of data units using the predetermined sequence number associated with the reset command; and

means for delivering respective subsequent data units in the sequence using respective successive sequence numbers.

70. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to store data relating to at least one data unit to be transmitted upon a handover of communication service to the wireless communications apparatus;

code to store data relating to at least one indicator that facilitates lossless delivery of the at least one data unit through the handover of communication service, the at least one indicator including sequence number information directly forwarded from a source eNodeB to a target eNodeB;

code to store data relating to a reset command and a predetermined sequence number associated with the reset command;

code to deliver the at least one data unit based on the at least one indicator;

code to deliver an initial data unit in a sequence of data units using the predetermined sequence number associated with the reset command; and

code to deliver respective subsequent data units in the sequence using respective successive sequence numbers.

71. An apparatus for processing packets received during a handoff operation, comprising:

a memory that stores data relating to at least one received packet from a first eNodeB, and

at least one processor coupled to the memory and configured:

to identify information associated with a handoff from the first eNodeB to a second eNodeB;

to receive at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB;

to identify a sequence number associated with a final packet received from the first eNodeB;

to identify a step value for sequence numbers utilized in connection with the handoff from the first eNodeB to the second eNodeB;

to receive the at least one packet at the second eNodeB having a sequence number associated with the at least one packet based on the identified step value; and

to process the at least one packet without requiring a delay for detecting additional packets, wherein the step value is known prior to the handoff from the first eNodeB to the second eNodeB.

72. An apparatus for processing packets received during a handoff operation, comprising:

means for storing data relating to at least one received packet from a first eNodeB, and

means for identifying information associated with a handoff from the first eNodeB to a second eNodeB;

means for receiving at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB,

means for identifying a sequence number associated with a final packet received from the first eNodeB;

means for identifying a step value for sequence numbers utilized in connection with the handoff from the first eNodeB to the second eNodeB;

means for receiving the at least one packet at the second eNodeB having a sequence number associated with the at least one packet based on the identified step value; and

means for processing the at least one packet without requiring a delay for detecting additional packets, wherein the step value is known prior to the handoff from the first eNodeB to the second eNodeB.

73. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to store data relating to at least one received packet from a first eNodeB,

code to identify information associated with a handoff from the first eNodeB to a second eNodeB;

code to receive at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB,

code to identify a sequence number associated with a final packet received from the first eNodeB;

code to identify a step value for sequence numbers utilized in connection with the handoff from the first eNodeB to the second eNodeB;

code to receive the at least one packet at the second eNodeB having a sequence number associated with the at least one packet based on the identified step value; and

code to process the at least one packet without requiring a delay for detecting additional packets, wherein the

step value is known prior to the handoff from the first eNodeB to the second eNodeB.

74. An apparatus for processing packets received during a handoff operation, comprising:

a memory that stores data relating to at least one received packet from a first eNodeB, and

at least one processor coupled to the memory and configured:

to identify information associated with a handoff from the first eNodeB to a second eNodeB;

to receive at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB,

to receive a reset indication;

to receive the at least one packet at the second eNodeB having a sequence number equal to a predetermined reset sequence number; and

to process the at least one packet without requiring a delay for detecting additional packets.

75. An apparatus for processing packets received during a handoff operation, comprising:

means for receiving at least one packet from a first eNodeB;

means for identifying information associated with a handoff from the first eNodeB to a second eNodeB;

means for receiving at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB;

means for receiving a reset indication;

means for receiving the at least one packet at the second eNodeB having a sequence number equal to a predetermined reset sequence number; and

means for processing the at least one packet without requiring a delay for detecting additional packets.

76. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to receive at least one packet from a first eNodeB;

code to identify information associated with a handoff from the first eNodeB to a second eNodeB;

code to receive at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB;

code to receive a reset indication;

code to receive the at least one packet at the second eNodeB having a sequence number equal to a predetermined reset sequence number; and

code to process the at least one packet without requiring a delay for detecting additional packets.

77. An apparatus for processing packets received during a handoff operation, comprising:

a memory that stores data relating to at least one received packet from a first eNodeB, and

at least one processor coupled to the memory and configured:

to identify information associated with a handoff from the first eNodeB to a second eNodeB;

to receive at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB,

to receive a handover indication; and

to identify an implicitly provided reset indication based on the handover indication and at least one radio bearer associated with the handoff.

78. An apparatus for processing packets received during a handoff operation, comprising:

means for receiving at least one packet from a first eNodeB;

means for identifying information associated with a handoff from the first eNodeB to a second eNodeB; and

means for receiving at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB,

means for receiving a handover indication; and

means for identifying an implicitly provided reset indication based on the handover indication and at least one radio bearer associated with the handoff.

79. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to receive at least one packet from a first eNodeB;

code to identify information associated with a handoff from the first eNodeB to a second eNodeB; and

code to receive at least one packet at the second eNodeB from the first eNodeB based on the identified information, at least a portion of the identified information including a sequence number directly forwarded from the first eNodeB to the second eNodeB,

code to receive a handover indication; and

code to identify an implicitly provided reset indication based on the handover indication and at least one radio bearer associated with the handoff.

80. A method for managing communication in a wireless communication system, comprising:

storing data relating to respective data units received from a first base station;

storing data relating to respective sequence numbers associated with the data units received directly from the first base station;

storing data relating to information relating to a handover from the first base station to a second base station;

storing data relating to a reset command;

receiving at least one data unit at the second base station based on the information relating to the handover without requiring a delay for attempting to detect additional data units;

attempting to detect a predetermined data unit at the second base station having a sequence number equal to a predetermined reset value; and

processing the predetermined data unit upon detection without requiring a delay for attempting to detect additional data units.

81. An apparatus for managing communication in a wireless communication system, comprising:

means for storing data relating to respective data units received from a first base station;

means for storing data relating to respective sequence numbers associated with the data units received directly from the first base station;

means for storing data relating to information relating to a handover from the first base station to a second base station;

means for storing data relating to a reset command;

means for receiving at least one data unit at the second base station based on the information relating to the handover without requiring a delay for attempting to detect additional data units;

means for attempting to detect a predetermined data unit at the second base station having a sequence number equal to a predetermined reset value; and

means for processing the predetermined data unit upon detection without requiring a delay for attempting to detect additional data units.

82. A computer program product, comprising:

a non-transitory computer-readable medium comprising:

code to store data relating to respective data units received from a first base station;

code to store data relating to respective sequence numbers associated with the data units received directly from the first base station;

code to store data relating to information relating to a handover from the first base station to a second base station;

code to store data relating to a reset command;

code to receive at least one data unit at the second base station based on the information relating to the handover without requiring a delay for attempting to detect additional data units;

code to attempt to detect a predetermined data unit at the second base station having a sequence number equal to a predetermined reset value; and

code to process the predetermined data unit upon detection without requiring a delay for attempting to detect additional data units.