CLAIMS

1. A method of session handoff comprising:

tunneling between a source access system and a target access system; and

transmitting handover-related signals from an access terminal (AT) to the target access system *via* the tunneling act and through the source access system.

2. The method of claim 1 further comprising establishing a tunnel from the AT to the source access system, wherein the source access system or the target access system is operable based on at least one of a 3GPP specification, a 3GPP2 specification, or an IEEE specification.

3. The method of claim 1, wherein transmitting handover-related signals further comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system.

4. The method of claim 1 further comprising initiating a handover preparation stage between the AT and the target access system, upon triggering of a predetermined event.

5. The method of claim 1, further comprising receiving advertising from the target access system indicating that the AT is reaching an edge of coverage, and initiating the tunneling and the transmitting of handover-related signals based on the receiving of the advertising.

6. The method of claim 1, wherein transmitting handover-related signals further comprises presetting a Radio Access Network (RAN) parameter associated with the target access system.

7. The method of claim 1, further comprising requesting over-the-air resources from the target access system to initiate communication between the AT and the target access system.

8. The method of claim 1, further comprising registering the AT with the target access system to complete a session handoff.

9. The method of claim 1, wherein the tunneling is based on a mapping from the source access system to the target access system to facilitate handover preparation of the AT to the target access system.

10. At least one processor configured to supply session handoff comprising:

a first module for establishing a tunnel between a source access system and a target access system, wherein the source access system comprises a first technology different from a second technology of the target access system; and

a second module for transmitting handover-related packets from an AT to a target access system through the tunnel.

11. A computer program product comprising:

a computer-readable comprising:

a first set of codes for causing a computer to establish a tunnel between a source access system and a target access system that are heterogeneous; and

a second set of codes for causing the computer to transmit packets from an AT to the target access system *via* the tunnel and through the source access system.

12. An apparatus comprising:

transmitting means for transmitting signals between heterogeneous source and target access systems; and

means for sending packets from an AT to a target access system through the transmitting means.

13. A method of session handoff comprising;

tunneling between a target access system and a source access system that implement different technologies; and

receiving packets by the target access system that are transmitted by an AT and re-routed through the source access system.

14. The method of claim 13, the tunneling act occurring without knowledge of the AT.

15. The method of claim 13, further comprising negotiating a session between the AT and the target access system as part of a handover preparation.

16. The method of claim 13, further comprising designating the target access system from pilot reports.

17. The method of claim 13, further comprising initiating a handover preparation stage upon triggering of a predetermined event, to facilitate communication of the AT with the target access system.

18. The method of claim 13 further comprising notifying the source access system of the session handoff, to initiate handover preparation.

19. The method of claim 13, further comprising advertising by the source access system to indicate that the AT is reaching an edge of coverage.

20. The method of claim 13, further comprising weakening of a pilot signal received by the access source system, to trigger session handoff.

21. The method of claim 13, further comprising requesting over an air resource from the target access system during handover preparation.

22. The method of claim 13, further comprising registering the AT with the target access system, to complete handover execution.

23. The method of claim 13, further comprising mapping from the source access system to the target access system, to facilitate handover preparation between the source access system and the target access system.

24. The method of claim 13 the tunneling act based on one of an intersystem signaling protocol, and a target system signaling.

25. A computer implemented system comprising:

a wireless access terminal operable in both a target access system and a source access system of a heterogeneous wireless communication system; and

an inter-system handoff control component operable to transfer a session from the source access system to the target access system.

26. A system for wireless communication comprising:

a memory unit that supplies instructions for switching between a source access system and a target access system that are heterogeneous; and

a processor unit that executes the instructions for an L2 layer tunneling to the target access system.

27. A communications system, comprising:

communication means for communicating data packets to an access terminal in a heterogeneous communication system; and

means for switching the access terminal from a source access system to a target access systems of the communication means.

28. The communication system of claim 27, further comprising means for tunneling to the access terminal at a data link layer.

29. The communication system of claim 28, further comprising means for identifying the target access system.

30. The communication system of claim 27, further comprising means for preparing a session handover to the target access system.

CLAIMS

1. A method of session handoff in wireless communications, comprising:

initiating a handover preparation stage between an access terminal (AT) and a target access system, upon triggering of a predetermined event, wherein the predetermined event at least comprises receiving advertising from the target access system indicating that the AT is reaching an edge of coverage of a source access system;

tunneling between the source access system and the target access system; and

transmitting handover-related signals received from the AT through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the target access system,

wherein the transmitting comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system, and the initiating and the transmitting are based at least in part on the received advertising.

2. The method of claim **1** further comprising establishing a tunnel from the AT to the source access system, wherein the source access system or the target access system is operable based on at least one of a 3GPP specification, a 3GPP2 specification, or an IEEE specification.

3. The method of claim 1, wherein transmitting handover-related signals further comprises presetting a Radio Access Network (RAN) parameter associated with the target access system.

4. The method of claim 1, further comprising requesting over-the-air resources from the target access system to initiate communication between the AT and the target access system.

5. The method of claim 1, further comprising registering the AT with the target access system to complete a session handoff.

6. The method of claim 1, wherein the tunneling is based on a mapping from the source access system to the target access system to facilitate handover preparation of the AT to the target access system.

7. At least one processor configured to supply session handoff comprising:

a first module, comprising hardware, for initiating a handover preparation stage between an access terminal (AT) and a target access system, upon triggering of a predetermined event, wherein the predetermined event at least comprises receiving advertising from the target access system indicating that the AT is reaching an edge of coverage of a source access system;

a second module for establishing a tunnel between the source access system and the target access system, wherein the source access system comprises a first technology different from a second technology of the target access system; and

a third module for transmitting handover-related packets received from the AT through the source access system to the target access system to facilitate the session handoff from the source access system to the target access system,

wherein the initiating and the transmitting are based at least in part on the received advertising, and the transmitting comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system.

8. A computer program product comprising:

a non-transitory computer-readable medium comprising:

a first set of codes for causing a computer to initiate a handover preparation stage between an access terminal (AT) and a target access system, upon triggering of a predetermined event, wherein the predetermined event at least comprises receiving advertising from the target access system indicating that the AT is reaching an edge of coverage of a source access system;

a second set of codes for causing the computer to establish a tunnel between the source access system and the target access system that are heterogeneous; and

a third set of codes for causing the computer to transmit packets received from the AT through the source access system to the target access system via the tunnel to facilitate session handoff from the source access system to the target access system,

wherein the transmitting comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system, and the initiating and the transmitting are based at least in part on the received advertising.

9. An apparatus comprising:

means for initiating a handover preparation stage between an access terminal (AT) and a target access system, upon

triggering of a predetermined event, wherein the predetermined event at least comprises receiving advertising from the target access system indicating that the AT is reaching an edge of coverage of a source access system;

means for tunneling between the source access system and the target access system; and

means for sending packets received from the AT through the source access system to the target access system via the tunnel to facilitate session handoff from the source access system to the target access system,

wherein the means for sending comprises means for negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system, and the means for initiating and the means for sending are based at least in part on the received advertising.

10. A method of session handoff in wireless communications, comprising:

tunneling between a target access system and a source access system that implement different technologies;

advertising by the target access system to indicate that an access terminal (AT) is reaching an edge of coverage of the source access system;

negotiating a session between the AT and the target access system as part of a handover preparation; and

receiving packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

11. The method of claim **10**, the tunneling occurring without knowledge of the AT.

12. The method of claim **10**, further comprising designating the target access system from pilot reports.

13. The method of claim **10**, further comprising, prior to the tunneling, initiating a handover preparation stage upon triggering of a predetermined event, to facilitate communication of the AT with the target access system.

14. The method of claim **10**, further comprising notifying the source access system of the session handoff as part of the handover preparation.

15. The method of claim **13**, wherein the predetermined event comprises weakening of a pilot signal received by the source access system.

16. The method of claim **10**, further comprising requesting over-the-air resource from the target access system during handover preparation.

17. The method of claim **10**, further comprising registering the AT with the target access system, to complete handover execution.

18. The method of claim **10**, further comprising mapping from the source access system to the target access system, to facilitate handover preparation between the source access system and the target access system.

19. The method of claim **10**, wherein the tunneling is based on one of an intersystem signaling protocol, and a target system signaling.

20. The at least one processor of claim **7**, wherein establishing a tunnel comprises establishing an L2 layer tunneling to the target access system.

21. The apparatus of claim **9**, further comprising:

means for switching the access terminal from the source access system to the target access system.

22. The apparatus of claim **9**, wherein the means for tunneling further comprises means for tunneling to the access terminal at a data link layer.

23. The apparatus of claim **9**, further comprising means for identifying the target access system.

24. The apparatus of claim **9**, further comprising means for preparing a session handover to the target access system.

25. At least one processor configured to supply session handoff in wireless communications, comprising:

a first module, comprising hardware, for tunneling between a target access system and a source access system that implement different technologies;

a second module for advertising by the target access system to indicate that an access terminal (AT) is reaching an edge of coverage of the source access system;

a third module for negotiating a session between the AT and the target access system as part of a handover preparation; and

a fourth module for receiving packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

26. A computer program product, comprising:

a non-transitory computer-readable medium, comprising:

a first set of codes for causing a computer to tunnel between a target access system and a source access system that implement different technologies;

a second set of codes for causing the computer to advertise by the target access system to indicate that an access

terminal (AT) is reaching an edge of coverage of the source access system;

a third set of codes for causing the computer to negotiate a session between the AT and the target access system as part of a handover preparation; and

a fourth set of codes for causing the computer to receive packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

27. An apparatus, comprising:

means for tunneling between a target access system and a source access system that implement different technologies;

means for advertising by the target access system to indicate that an access terminal (AT) is reaching an edge of coverage of the source access system;

means for negotiating a session between the AT and the target access system as part of a handover preparation; and

means for receiving packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

28. The apparatus of claim **27**, further comprising, prior to the tunneling, means for initiating a handover preparation stage upon triggering of at least one event, to facilitate communication of the AT with the target access system.

29. The apparatus of claim **28**, wherein the at least one event comprises weakening of a pilot signal received by the source access system.

30. The apparatus of claim **27**, wherein the means for tunneling comprises means for establishing an L2 layer tunneling to the target access system.

31. A method of session handoff in wireless communications, comprising:

tunneling between a source access system and a target access system;

transmitting handover-related signals received from an access terminal (AT) through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the target access system, wherein the transmitting comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system; and

requesting over-the-air resources from the target access system to initiate communication between the AT and the target access system.

32. At least one processor configured to supply session handoff in wireless communications, comprising:

a first module, comprising hardware, for tunneling between a source access system and a target access system;

a second module for transmitting handover-related signals received from an access terminal (AT) through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the target access system, wherein the transmitting comprises negotiating a ses-

sion between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system; and

a third module for requesting over-the-air resources from the target access system to initiate communication between the AT and the target access system.

33. A computer program product comprising:

a non-transitory computer-readable medium comprising:

a first set of codes for causing a computer to tunnel between a source access system and a target access system;

a second set of codes for causing the computer to transmit handover-related signals received from an access terminal (AT) through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the target access system, wherein the transmitting comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system; and

a third set of codes for causing the computer to request over-the-air resources from the target access system to initiate communication between the AT and the target access system.

34. An apparatus comprising:

means for tunneling between a source access system and a target access system;

means for transmitting handover-related signals received from an access terminal (AT) through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the target access system, wherein the transmitting comprises negotiating a session between the AT

and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system; and

means for requesting over-the-air resources from the target access system to initiate communication between the AT and the target access system.

35. A method of session handoff in wireless communications, comprising:

tunneling between a source access system and a target access system based on a mapping from the source access system to the target access system to facilitate handover preparation of an access terminal (AT) to the target access system; and

transmitting handover-related signals received from the AT through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the target access system, wherein the transmitting comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system.

36. At least one processor configured to supply session handoff in wireless communications, comprising:

a first module, comprising hardware, for tunneling between a source access system and a target access system based on a mapping from the source access system to the target access system to facilitate handover preparation of an access terminal (AT) to the target access system; and

a second module for transmitting handover-related signals received from the AT through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the

target access system, wherein the transmitting comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system.

37. A computer program product comprising:

a non-transitory computer-readable medium comprising:

a first set of codes for causing a computer to tunnel between a source access system and a target access system based on a mapping from the source access system to the target access system to facilitate handover preparation of an access terminal (AT) to the target access system; and

a second set of codes for causing the computer to transmit handover-related signals received from the AT through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the target access system, wherein the transmitting comprises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system.

38. An apparatus comprising:

means for tunneling between a source access system and a target access system based on a mapping from the source access system to the target access system to facilitate handover preparation of an access terminal (AT) to the target access system; and

means for transmitting handover-related signals received from the AT through the source access system to the target access system via the tunneling to facilitate the session handoff from the source access system to the target access system, wherein the transmitting com-

prises negotiating a session between the AT and the target access system to facilitate handover of a communication session of the AT from the source access system to the target access system.

39. A method of session handoff in wireless communications, comprising:

tunneling between a target access system and a source access system that implement different technologies;

negotiating a session between an access terminal (AT) and the target access system as part of a handover preparation;

requesting over-the-air resources from the target access system during the handover preparation; and

receiving packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

40. At least one processor configured to supply session handoff in wireless communications, comprising:

a first module, comprising hardware, for tunneling between a target access system and a source access system that implement different technologies;

a second module for negotiating a session between an access terminal (AT) and the target access system as part of a handover preparation;

a third module for requesting over-the-air resources from the target access system during the handover preparation; and

a fourth module for receiving packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and

re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

41. A computer program product, comprising:

a non-transitory computer-readable medium, comprising:

a first set of codes for causing a computer to tunnel between a target access system and a source access system that implement different technologies;

a second set of codes for causing the computer to negotiate a session between an access terminal (AT) and the target access system as part of a handover preparation;

a third set of codes for causing the computer to request over-the-air resources from the target access system during the handover preparation; and

a fourth set of codes for causing the computer to receive packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

42. An apparatus, comprising:

means for tunneling between a target access system and a source access system that implement different technologies;

means for negotiating a session between an access terminal (AT) and the target access system as part of a handover preparation;

means for requesting over-the-air resources from the target access system during the handover preparation; and

means for receiving packets by the target access system that are transmitted by the AT, wherein the packets are

initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

43. A method of session handoff in wireless communications, comprising:

tunneling between a target access system and a source access system that implement different technologies;

negotiating a session between an access terminal (AT) and the target access system as part of a handover preparation;

mapping from the source access system to the target access system, to facilitate the handover preparation between the source access system and the target access system; and

receiving packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

44. At least one processor configured to supply session handoff in wireless communications, comprising:

a first module, comprising hardware, for tunneling between a target access system and a source access system that implement different technologies;

a second module for negotiating a session between an access terminal (AT) and the target access system as part of a handover preparation;

a third module for mapping from the source access system to the target access system, to facilitate the handover preparation between the source access system and the target access system; and

a fourth module for receiving packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

45. A computer program product, comprising:

a non-transitory computer-readable medium, comprising:

a first set of codes for causing a computer to tunnel between a target access system and a source access system that implement different technologies;

a second set of codes for causing the computer to negotiate a session between an access terminal (AT) and the target access system as part of a handover preparation;

a third set of codes for causing the computer to map from the source access system to the target access system, to facilitate the handover preparation between the source access system and the target access system; and

a fourth set of codes for causing the computer to receive packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

46. An apparatus comprising:

means for tunneling between a target access system and a source access system that implement different technologies;

means for negotiating a session between an access terminal (AT) and the target access system as part of a handover preparation;

means for mapping from the source access system to the target access system, to facilitate the handover preparation between the source access system and the target access system; and

means for receiving packets by the target access system that are transmitted by the AT, wherein the packets are initially received by the source access system and re-routed through the source access system to the target access system via the tunnel to facilitate the session handoff from the source access system to the target access system.

47. The method of claim **1**, wherein the target access system is designated from pilot reports.

48. The method of claim **1**, wherein the predetermined event comprises weakening of a pilot signal received by the source access system.