CLAIMS

WHAT IS CLAIMED IS:

1. A method of session handoff between a source access system and a target access system comprising:

discovering an address of the target access system for tunneling from an access terminal (AT) in communication with a source access system;

tunneling a secure channel to the target access system; and

transferring user traffic from the source access system *via* the tunneling act to the target access system and through the source access system.

2. The method of claim 1, the tunneling act further comprising tunneling a secure channel to a security gateway of the target access system.

3. The method of claim 1 further comprising supplying a Unicast Access Terminal Identifier (UATI) to locate a session associated with the access terminal.

4. The method of claim 3 further comprising pointing to a RAN-lite of the target access system *via* the UATI, to facilitate establishing a tunnel to the RAN-lite of the target access system.

5. The method of claim 1 further comprising monitoring a pilot of the target access system while operating in the source radio access system.

6. 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.

7. The method of claim 1 further comprising 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. 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 based on the receiving act.

9. The method of claim 2 further comprising pre-establishing a session with a module that contains protocol for negotiating a session for the target access system.

10. The method of claim 10 further comprising supplying a handoff to a real RAN via an intra technology handoff interface.

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

a first module for discovering an address of a target access system for tunneling between a source access system and a target access system; and

a second module for establishing a secure tunnel form an AT to a security gateway of the target access system through the source access system.

12. A computer program product comprising:

a computer-readable comprising:

a first set of codes for causing a computer to discover an address of a security gateway for a target access system for tunneling from an access terminal; and

a second set of codes for establishing a secure tunnel to a security gateway of the target access system and redirecting user traffic thereto.

13. An apparatus comprising:

discovery means for discovering an address of RAN-lite associated with a target access system for tunneling from an access terminal;

transmitting means for transmitting signals between a heterogeneous source access system and the target access system; and

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

14 A method of session handoff between a source access system and a target access system comprising:

discovering an address of the target access system for tunneling from an access terminal;

tunneling a secure channel to a security gateway of the target access system; and

receiving user traffic by the target access system *via* the tunneling act.

15. The method of claim 14 further comprising establishing radio access session over an IP session through the secure channel by employing UATIs supplied by the AT.

16. The method of claim 14 further comprising receiving a pointer to a RAN-lite of the target access system and triggering a handoff thereby.

17. The method of claim 14 further comprising monitoring target access system pilot while operating in the source radio access system.

18. The method of claim 14 further comprising establishing a tunnel from the AT to the target 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.

19. The method of claim 14 further comprising 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.

20. The method of claim 14 further comprising initiating a handover preparation stage to the target access system, upon triggering of a predetermined event.

21. The method of claim 14 further comprising sending advertising by the target access system.

22. The method of claim 14 further comprising pre-establishing a session with a RAN-lite of the target access system to facilitate communication with the real RAN.

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

a first module for discovering an address of a security gateway of a target access system; and

a second module for establishing a tunnel from an access terminal to the target access system, *via* a source access system.

24. A computer program product comprising:

a computer-readable comprising:

a first set of codes for causing a computer to discover an address of a security gateway for a target access system; and

a second set of codes for establishing a tunnel from an access terminal to a RAN-lite of the target access system, *via* a source access system.

25. An apparatus comprising:

discovery means for discovering an address of a target access system for tunneling from an access terminal;

means for establishing a secure channel to a security gateway of the target access system through a source access system; and

transmitting means for transmitting signals through the secure channel.

26. The communication system of claim 25, further comprising means for tunneling to the access terminal at a data link layer.

27. The communication system of claim 26, further comprising means for identifying a RAN-lite of the target access system.

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

CLAIMS

1. A method for inter-system handoff of wireless communications between a source access system and a target access system comprising:

communicating over the air, by an access terminal (AT), with the source access system in a protocol of the source access system;

initiating, by the AT, handoff preparation with the target access system by tunneling over the source access system signaling in a protocol of the target access system, said signaling relating to establishment of an air interface session with the target access system; and

communicating, by the AT, with the target access system over the air based at least in part on information received from the target access system as part of the handoff preparation, wherein the information received from the target access system as part of the handover preparation is tunneled over the source access system for delivery to the AT.

2. The method of claim 1, wherein the handoff preparation comprises sending, by the AT, a request for radio resources at the target access system for tunneling over the source access system.

3. The method of claim 2, further comprising:

receiving an assignment of radio resources at the target access system in response to the request via the tunneling over the source access system.

4. The method of claim 1, wherein the signaling in the protocol of the target access system is transparent to the source access system.

5. The method of claim 1, wherein the handoff preparation with the target access system is transparent to the source access system.

6. The method of claim **1**, further comprising:

monitoring a pilot of the target access system while operating in the source access system.

7. The method of claim **1**, further comprising:

negotiating, by the AT, the air interface session with the target access system in advance of the handoff from the source access system.

8. The method of claim **1**, wherein the handoff preparation comprises:

establishing one or more tunnels from the AT to the target access system for exchanging handoff related information.

9. The method of claim **1**, further comprising:

discovering, by the AT, an address of the target access system.

10. The method of claim **1**, further comprising:

negotiating the air interface session in a protocol of the target access system prior to a handover of a communication session of the AT from the source access system to the target access system.

11. The method of claim **1**, further comprising:

communicating, by the AT, with the target access system via a tunneled secure communication while the AT is connected to the source access system.

12. The method of claim **1**, further comprising:

transferring handover related information for the target access system from the AT to the source access system via a tunneled secure communication.

13. The method of claim **1**, further comprising:

communicating, by the AT, with the target access system via a tunneled secure communication, the tunneled secure communication extending from the AT, through the source access system, and to the target access system.

14. The method of claim **1**, wherein the target access system comprises a first radio access technology (RAT) and the source access system comprises a second RAT.

15. The method of claim **14**, wherein the target access system comprises a High Rate Packet Data (HRPD) RAT and the source access system comprises a Long Term Evolution (LTE) RAT.

16. The method of claim **14**, wherein the target access system comprises a Code Division Multiple Access (CDMA) RAT and the source access system comprises a Long Term Evolution (LTE) RAT.

17. An apparatus configured for inter-system handoff of wireless communications between a source access system and a target access system, comprising:

means for communicating over the air with the source access system in a protocol of the source access system;

means for initiating handoff preparation with the target access system by tunneling over the source access system signaling in a protocol of the target access system, said signaling relating to establishment of an air interface session with the target access system; and

means for communicating with the target access system over the air based at least in part on information received from the target access system as part of the handoff preparation, wherein the information received from the target access system as part of the handover preparation is tunneled over the source access system.

18. The apparatus of claim **17**, wherein the handoff preparation comprises means for sending a request for radio resources at the target access system for tunneling over the source access system.

19. The apparatus of claim **18**, further comprising:

means for receiving an assignment of radio resources at the target access system in response to the request via the tunneling over the source access system.

20. The apparatus of claim **17**, wherein the signaling in the protocol of the target access system is transparent to the source access system.

21. The apparatus of claim **17**, wherein the handoff preparation with the target access system is transparent to the source access system.

22. The apparatus of claim **17**, further comprising:

means for monitoring a pilot of the target access system while operating in the source access system.

23. The apparatus of claim **17**, further comprising:

means for negotiating the air interface session with the target access system in advance of the handoff from the source access system.

24. The apparatus of claim **17**, wherein the handoff preparation comprises:

means for establishing one or more tunnels to the target access system for exchanging handoff related information.

25. The apparatus of claim **17**, further comprising:

means for discovering an address of the target access system.

26. The apparatus of claim **17**, further comprising:

means for negotiating the air interface session in a protocol of the target access system prior to a handover of a communication session from the source access system to the target access system.

27. The apparatus of claim **17**, further comprising:

means for communicating with the target access system via a tunneled secure communication while connected to the source access system.

28. The apparatus of claim **17**, further comprising:

means for transferring handover related information for the target access system to the source access system via a tunneled secure communication.

29. An access terminal configured for inter-system handoff of wireless communications between a source access system and a target access system, comprising:

a processor;

a memory in electronic communication with the processor; and

instructions stored in the memory, the instructions being executable by the processor to:

communicate over the air with the source access system in a protocol of the source access system;

initiate handoff preparation with the target access system by tunneling over the source access system signaling in a protocol of the target access system, said signaling relating to establishment of an air interface session with the target access system; and

communicate with the target access system over the air based at least in part on information received from the target access system as part of the handoff preparation, wherein the information received from the target access system as part of the handover preparation is tunneled over the source access system.

30. The access terminal of claim **29**, wherein the handoff preparation comprises instructions executable by the processor to send a request for radio resources at the target access system for tunneling over the source access system.

31. The access terminal of claim **30**, wherein the instructions are executable by the processor to:

receive an assignment of radio resources at the target access system in response to the request via the tunneling over the source access system.

32. The access terminal of claim **29**, wherein the signaling in the protocol of the target access system is transparent to the source access system.

33. The access terminal of claim **29**, wherein the handoff preparation with the target access system is transparent to the source access system.

34. The access terminal of claim **29**, wherein the instructions are executable by the processor to:

monitor a pilot of the target access system while operating in the source access system.

35. The access terminal of claim **29**, wherein the instructions are executable by the processor to:

negotiate the air interface session with the target access system in advance of the handoff from the source access system.

36. A computer program product for inter-system handoff of wireless communications between a source access system and a target access system, the computer program product comprising a non-transitory computer-readable medium storing instructions executable by a processor to:

communicate over the air, by an access terminal (AT), with the source access system in a protocol of the source access system;

initiate, by the AT, handoff preparation with the target access system by tunneling over the source access system signaling in a protocol of the target access system, said signaling relating to establishment of an air interface session with the target access system; and

communicate, by the AT, with the target access system over the air based at least in part on information received from the target access system as part of the handoff preparation, wherein the information received from the target access system as part of the handover preparation is tunneled over the source access system for delivery to the AT.

37. The computer program product of claim **36**, wherein the handoff preparation comprises sending, by the AT, a request for radio resources at the target access system for tunneling over the source access system.

38. The computer program product of claim **37**, wherein the instructions are executable by the processor to:

receive an assignment of radio resources at the target access system in response to the request via the tunneling over the source access system.

39. The computer program product of claim **36**, wherein the signaling in the protocol of the target access system is transparent to the source access system.

40. The computer program product of claim **36**, wherein the handoff preparation with the target access system is transparent to the source access system.