

WE CLAIM:

1. A method providing packet communications over a wireless channel (300) between a radio network node (100) and a wireless terminal (200), wherein the wireless terminal (200) includes a jitter buffer (303) configured to reduce jitter resulting from different delays of data packets received at the wireless terminal (200), the method comprising:

emulating (703, 705, 717, 707, 719) operation of the jitter buffer (303) for the wireless terminal (200) responsive to data packet transmissions from the radio network node (100) to the wireless terminal (200); and

responsive to emulating operation of the jitter buffer (303) for the wireless terminal (200), providing (721) a parameter of emulated operation of the jitter buffer (303) including at least one of an emulated late packet loss occurrence, an emulated time scaling occurrence, an emulated jitter buffer fill level, and/or an emulated jitter buffer fill level threshold.

2. The method according to Claim 1 wherein emulating operation of the jitter buffer (303) comprises,

updating (801) an emulated buffer fill level for the emulated jitter buffer responsive to transmitting a data packet from the radio network node (100) to the wireless terminal (200).

3. The method according to Claim 2 wherein updating (801) the emulated jitter buffer fill level further comprises

updating (801) the emulated jitter buffer fill level responsive to an acknowledge message and/or a negative acknowledge message received at the radio network node (100) from the wireless terminal (200) for the data packet.

4. The method according to any one of Claims 1-3 wherein emulating operation of the jitter buffer (303) further comprises,

computing (803) a buffer fill level threshold.

5. The method according to any one of Claims 1-4 wherein emulating operation of the jitter buffer (303) comprises,

reducing (915) an emulated play-out rate responsive to a minimum buffer level threshold exceeding the emulated buffer fill level, and/or

increasing (917) an emulated play-out rate responsive to an emulated buffer fill level exceeding a maximum buffer level threshold.

6. The method according to any one of Claims 1-5 wherein providing the parameter of the emulated jitter buffer (303) comprises generating a log including at least one of emulated late packet loss occurrences, emulated time scaling occurrences, emulated jitter buffer fill levels, and/or emulated jitter buffer fill level thresholds.

7. The method according to Claim 6 wherein providing the parameter of the emulated jitter buffer further comprises estimating a quality of communications reproduced at the wireless terminal (200) responsive to generating the log.

8. The method according to any one of Claims 1-7 wherein the packet communications comprise Voice over Internet Protocol, VoIP, packet communications, and wherein the data packets comprise VoIP data packets.

9. The method according to any one of Claims 1-8 further comprising:
receiving (506) a jitter buffer identifier at the radio network node (100) from the wireless terminal (200) identifying one of a plurality of jitter buffer types,
wherein emulating operation of the jitter buffer (303) comprises emulating operation of the jitter buffer (303) using an emulator selected responsive to the jitter buffer identifier received at the radio network node (100).

10. A radio network node (100) in a radio access network (60) providing packet communications, the radio network node (100) comprising:

a transceiver (109) configured to provide communications over a wireless channel (300) between the radio network node (100) and a wireless terminal (200), wherein the wireless terminal (200) includes a jitter buffer (303) configured to reduce jitter resulting from different delays of data packets received at the wireless terminal (200); and

a processor (101) coupled to the transceiver (109) wherein the processor (101) is configured to emulate operation of the jitter buffer (303) for the wireless terminal (200) responsive to data packet transmissions from the radio network node (100) through the transceiver 109 to the wireless terminal (200), and wherein the processor (101) is further configured to provide a parameter of emulated operation of the jitter buffer (303) including at

least one of an emulated late packet loss occurrence, an emulated time scaling occurrence, an emulated jitter buffer fill level, and/or an emulated jitter buffer fill level threshold responsive to emulating operation of the jitter buffer (303) for the wireless terminal (200).

11. The radio network node (100) according to Claim 10 wherein the processor (101) is further configured to emulate operation of the jitter buffer (303) by updating an emulated buffer fill level for the emulated jitter buffer responsive to transmitting a data packet from the radio network node (100) to the wireless terminal (200).

12. The radio network node (100) according to Claim 11 wherein the processor (101) is configured to update the emulated buffer fill level by updating the emulated jitter buffer fill level responsive to an acknowledge message and/or a negative acknowledge message received through the transceiver (109) from the wireless terminal (200) for the data packet.

13. The radio network node (100) according to any one of Claims 10-12 wherein the processor (101) is further configured to emulate operation of the jitter buffer (303) by computing a buffer fill level threshold.

14. The radio network node (100) according to any one of Claims 10-13 wherein the processor (101) is configured to emulate operation of the jitter buffer (303) by reducing an emulated play-out rate responsive to a minimum buffer level threshold exceeding the emulated buffer fill level, and/or by increasing an emulated play-out rate responsive to an emulated buffer fill level exceeding a maximum buffer level threshold.


15. The radio network node (100) according to any one of Claims 10-14 wherein the packet communications comprise Voice over Internet Protocol, VoIP, packet communications, and wherein the data packet transmissions comprise VoIP data packet transmissions.

16. The radio network node (100) according to any one of Claims 10-15 wherein the processor (101) is further configured to receive a jitter buffer identifier from the wireless terminal (200) through the transceiver (117) wherein the jitter buffer identifier identifies one of a plurality of jitter buffer types, and wherein the processor (101) is configured to emulate

operation of the jitter buffer (303) using an emulator selected responsive to the jitter buffer identifier.

17. The radio network node (100) according to any one of Claims 10-16 wherein the processor is further configured to receive a data packet from a core network (70) for transmission through the transceiver (109) to the wireless terminal (200), to store the data packet in a scheduling buffer (409), to provide an initial scheduling priority for the data packet, to provide an updated scheduling priority for the data packet responsive to the parameter of emulated operation of the jitter buffer for the wireless terminal, and to transmit the data packet from the scheduling buffer over the radio link in accordance with the updated scheduling priority.

Dated this 5th day of May 2014.


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