CLAIMS

1. An apparatus for wireless communications, comprising:
an interface configured to receive, from a wireless node, one or more parameters specifying a memory at the wireless node, and ~~an indication of an amount of free memory space in the memory at the wireless node; and~~
a block acknowledgement (BA) frame including a receiver buffer capacity (RBUFCAP) field that is configured to include an indication of an amount of computed free memory space in the memory at the wireless node when the computed free memory space is less than an amount of memory for an aggregated data unit having a maximum length, an indication of no space available in the memory at the wireless node when zero space is available in the memory, and an indication that there is sufficient space in the memory at the wireless node for the aggregated data unit having the maximum length; and a processing system configured to determine a number of data units to be transmitted to the wireless node based on the ~~indication of the amount of free memory space and the one or more parameters;~~
one or more parameters specifying the memory at the wireless node, and the indication of the amount of computed free memory space when the free memory space is less than the amount of memory for the aggregated data unit having the maximum length, the indication of no space available in the memory when zero space is available in the memory, and the indication that there is sufficient space in the memory at the wireless node for the aggregated data unit having the maximum length; wherein the interface is further configured to output data units for transmission to the wireless node, wherein a number of the data units output for transmission to the wireless node equals the determined number of data units.

2. The apparatus of claim 1, wherein the one or more parameters include a parameter indicating a size of a memory unit, and the indication of the amount of free memory space is given in terms of the memory unit.

3. The apparatus of claim 1~~, wherein the interface is further configured to receive a block acknowledgement frame comprising the indication of the amount of free memory space.~~

~~4. The apparatus of claim 3, wherein the indication of the amount of free memory space is in a receiver buffer capacity (RBUFCAP) field of the block acknowledgement frame.~~

~~5. The apparatus of claim 3~~, wherein the interface is further configured to output a block acknowledgement request for transmission to the wireless node, and the block acknowledgement frame is received after the block acknowledgement request.

~~6.~~ 4. The apparatus of claim ~~3~~1, wherein the block acknowledgement frame is received unsolicited by the apparatus.

~~7.~~ 5. The apparatus of claim 1, wherein each of the data units is a media access control (MAC) protocol data unit (MPDU).

~~8.~~ 6. The apparatus of claim 1, wherein the interface is further configured to:

output an add block acknowledgement (ADDBA) request for transmission to the wireless node, the ADDBA request requesting a block acknowledgement session with the wireless node; and

receive, from the wireless node and after outputting the ADDBA request, an ADDBA response that comprises the one or more parameters.

7. The apparatus of claim 6, wherein the one or more parameters in the ADDBA response include a type of the data traffic.

8. The apparatus of claim 1, wherein the memory at the wireless node comprises a plurality of buffers, and the one or more parameters include a buffer size and a limit on a number of data units per buffer.

~~17.~~ 9. The apparatus of claim 1, wherein the memory at the wireless node comprises a plurality of buffers, and the one or more parameters include a parameter indicating whether a single data unit may be split between two or more of the plurality of buffers.

~~18.~~ 10. The apparatus of claim 1, wherein:

~~———~~ the interface is configured to receive a capabilities element indicating one or more capabilities of the wireless node; and

~~———~~ the processing system is configured to determine the number of data units to be transmitted to the wireless node based also on the one or more indicated capabilities.

~~19.~~ 11. The apparatus of claim 1, wherein:

the interface is further configured to receive an add block acknowledgement response including a dialog token set to zero ~~if~~when the add block acknowledgement response is not solicited by an add block acknowledgement request requesting a block acknowledgement session; and

~~———~~ the processing system is further configured to ignore one or more parameters of the block acknowledgement response ~~if the dialog token is set to zero, wherein the one or more parameters are associated with the block acknowledgement session.~~

~~20. The apparatus of claim 1, wherein:~~

~~———~~ ~~wherein the interface is further configured to receive another indication indicating:~~

~~another amount of free memory space at the wireless node;~~

~~that no space is available in the memory at the wireless node; or~~

~~that there is sufficient space in the memory at the wireless node for an aggregated data unit having a maximum length; and~~

~~———~~ ~~the processing system is configured to determine the number of data units to be transmitted to the wireless node based also on the other indication.~~

~~21. The apparatus of claim 20, wherein:~~

~~the one or more parameters include a parameter indicating a size of a memory unit; and~~

~~the indication of the other amount of free memory space is given in terms of the memory unit.~~

~~22. A method for wireless communications, comprising:~~

~~———~~ ~~receiving, from a wireless node, one or more parameters specifying a memory at the wireless node;~~

~~———~~ ~~receiving, from the wireless node, an indication of an amount of free memory space in the memory at the wireless node;~~

~~———~~ ~~determining a number of data units to be transmitted to the wireless node based on the indication of the amount of free memory space and the one or more parameters; and~~

~~———~~ ~~outputting data units for transmission to the wireless node, wherein a number of the data units output for transmission to the wireless node equals the determined number of data units.~~

23. The method of claim 22, wherein the one or more parameters include a parameter indicating a size of a memory unit, and the indication of the amount of free memory space is given in terms of the memory unit.

24. The method of claim 22, further comprising receiving a block acknowledgement frame comprising the indication of the amount of free memory space.

25. The method of claim 24, wherein the indication of the amount of free memory space is in a receiver buffer capacity (RBUFCAP) field of the block acknowledgement frame.

26. The method of claim 24, further comprising outputting a block acknowledgement request for transmission to the wireless node, wherein the block acknowledgement frame is received after block acknowledgement request.

27. The method of claim 24, wherein the block acknowledgement frame is received unsolicited.

28. The method of claim 22, wherein each of the data units is a media access control (MAC) protocol data unit (MPDU).

29. The method of claim 22, further comprising:

outputting an add block acknowledgement (ADDBA) request for transmission to the wireless node, the ADDBA request requesting a block acknowledgement session with the wireless node; and

receiving, from the wireless node and after outputting the ADDBA request, an ADDBA response that comprises the one or more parameters.

30. The method of claim 29, wherein the ADDBA request includes a traffic identifier identifying a data traffic, and the data units are part of the identified data traffic.

31. The method of claim 22, further comprising:

receiving, from the wireless node, an add traffic (ADDTS) request that comprises the one or more parameters; and

outputting an ADDTS response for transmission to the wireless, the ADDTS response acknowledging the ADDTS request.

32. The method of claim 22, wherein the memory at the wireless node comprises a plurality of buffers, and the one or more parameters include a buffer size and a limit on a number of data units per buffer.

33. The method of claim 22, wherein the one or more parameters include parameters for a plurality of different memory types.

34. The method of claim 33, wherein the plurality of different memory types includes a first-in first-out (FIFO) memory and a buffered memory.

35. The method of claim 33, further comprising receiving an indicator indicating one of the plurality of different memory types, and the determination of the number of data units to be transmitted to the wireless node is based also on the indicated one of the plurality of different memory types.

36. The method of claim 35, further comprising receiving a block acknowledgement that comprises the indicator indicating the one of the plurality of different memory types.

37. The method of claim 22, further comprising:

receiving a plurality of traffic identifiers, each of the traffic identifiers identifying a respective data traffic;

wherein outputting the one or more data units for transmission comprises outputting the one or more data units for transmission using at least one of the data traffics.

38. The method of claim 22, wherein the memory at the wireless node comprises a plurality of buffers, and the one or more parameters include a parameter indicating whether a single data unit may be split between two or more of the plurality of buffers.

39. The method of claim 22, further comprising:

receiving a capabilities element indicating one or more capabilities of the wireless node;

wherein determining the number of data units to be transmitted to the wireless node is based also on the one or more indicated capabilities.

40. The method of claim 22, further comprising:

receiving an add block acknowledgement response including a dialog token set to zero if the add block acknowledgement response is not solicited by an add block acknowledgement request requesting a block acknowledgement session; and

ignoring one or more parameters of the block acknowledgement response if<u>when</u> the dialog token is set to zero, wherein the one or more parameters are associated with the block acknowledgement session.

41. The method of claim 22, further comprising:

receiving another indication indicating:

another amount of free memory space at the <u>12. A</u> wireless node;

that no space is available in the memory at the wireless node; or

that there is sufficient space in the memory at the wireless node for an aggregated data unit having a maximum length;

wherein determining the number of data units to be transmitted to the wireless node is based also on the other indication.

42. The method of claim 41, wherein:

the one or more parameters include a parameter indicating a size of a memory unit; and

the indication of the other amount of free memory space is given in terms of the memory unit.

43. An apparatus for wireless communications, comprising:

means for receivinga receiver configured to receive, from aan other wireless node, one or more parameters specifying a memory at the other wireless node;

means for receiving, from the wireless node, an indication of an amount of free memory space in the memory at the wireless node;

means for determining a number of data units to be transmitted to the wireless node based on the indication of the amount of free memory space, and the one or more parameters; and

means for outputting data units for transmission to the wireless node, wherein a number of the data units output for transmission to the wireless node equals the determined number of data units.

44. The apparatus of claim 43, wherein the one or more parameters include a parameter indicating a size of a memory unit, and the indication of the amount of free memory space is given in terms of the memory unit.

45. The apparatus of claim 43, further comprising means for receiving a block acknowledgement (BA) frame that comprises the indication of the amount of free memory space.

46. The apparatus of claim 45, wherein the indication of the amount of free memory space is in a including a receiver buffer capacity (RBUFCAP) field of the block acknowledgement frame.

47. The apparatus of claim 45, further comprising means for outputting a block acknowledgement request for transmission to the wireless node, wherein the block acknowledgement frame is received after the block acknowledgement request.

48. The apparatus of claim 45, wherein the block acknowledgement frame is received unsolicited by the apparatus.

49. The apparatus of claim 43, wherein each of the data units is a media access control (MAC) protocol data unit (MPDU).

50. The apparatus of claim 43, further comprising:

means for outputting an add block acknowledgement (ADDBA) request for transmission to the wireless node, the ADDBA request requesting a block acknowledgement session with the wireless node; and

means for receiving, from the wireless node and after outputting the ADDBA request, an ADDBA response that comprises the one or more parameters.

51. The apparatus of claim 50, wherein the ADDBA request includes a traffic identifier identifying a data traffic, and the data units are part of the identified data traffic.

52. The apparatus of claim 43, further comprising:
means for receiving, from the wireless node, an add traffic (ADDTS) request that comprises the one or more parameters; and
means for outputting an ADDTS response for transmission to the wireless, the ADDTS response acknowledging the ADDTS request.

53. The apparatus of claim 43, wherein the memory at the wireless node comprises a plurality of buffers, and the one or more parameters is configured to include a buffer size and a limit on a number of data units per buffer.

54. The apparatus of claim 43, wherein the one or more parameters include parameters for a plurality of different memory types.

55. The apparatus of claim 54, wherein the plurality of different memory types includes a first-in first-out (FIFO) memory and a buffered memory.

56. The apparatus of claim 54, further comprising means for receiving an indicator indicating one of the plurality of different memory types, wherein the means for determining the number of data units to be transmitted to the wireless node determines the number of data units to be transmitted to the wireless node based also on the indicated one of the plurality of different memory types.

57. The apparatus of claim 56, further comprising means for receiving a block acknowledgement that comprises the indicator indicating the one of the plurality of different memory types.

58. The apparatus of claim 43, further comprising:
means for receiving a plurality of traffic identifiers, each of the traffic identifiers identifying a respective data traffic;
wherein the means for outputting the one or more data units for transmission comprises means for outputting the one or more data units for transmission using at least one of the data traffics.

59. The apparatus of claim 43, wherein the memory at the wireless node comprises a plurality of buffers, and the one or more parameters include a parameter indicating whether a single data unit may be split between two or more of the plurality of buffers.

60. The apparatus of claim 43, further comprising:

means for receiving a capabilities element indicating one or more capabilities of the wireless node;

wherein the means for determining the number of data units to be transmitted to the wireless node determines the number of data units to be transmitted to the wireless node based also on the one or more indicated capabilities.

61. The apparatus of claim 43, further comprising:

means for receiving an add block acknowledgement response including a dialog token set to zero if the add block acknowledgement response is not solicited by an add block acknowledgement request requesting a block acknowledgement session; and

means for ignoring one or more parameters of the block acknowledgement response if the dialog token is set to zero, wherein the one or more parameters are associated with the block acknowledgement session.

62. The apparatus of claim 43, further comprising:

means for receiving another an indication indicating:

another of an amount of computed free memory space at the wireless node;

that in the memory at the other wireless node when the computed free memory space is less than an amount of memory for an aggregated data unit having a maximum length, an indication of no space available in the memory at the other wireless node when zero space is available in the memory at the wireless node; or

, and an indication that there is sufficient space in the memory at the other wireless node for anthe aggregated data unit having athe maximum length;

wherein the means for determining the number of data units to be transmitted to the wireless node determines the number of data units to be transmitted based also on the other indication.

63. The apparatus of claim 62, wherein:

the one or more parameters include a parameter indicating a size of a memory unit; and

the indication of the other amount of free memory space is given in terms of the memory unit.

64. A computer readable medium comprising instructions stored thereon for:

receiving, from a wireless node, one or more parameters specifying a memory at the wireless node;

receiving, from the wireless node, an indication of an amount of free memory space in the memory at the wireless node;

determining a number of data units to be transmitted to the wireless node based on the indication of the amount of free memory space and the one or more parameters; and

outputting data units for transmission to the wireless node, wherein a number of the data units output for transmission to the wireless node equals the determined number of data units.

~~65. A wireless node, comprising:~~

~~a receiver configured to receive, from another wireless node, one or more parameters specifying a memory at the other wireless node, and an indication of an amount of free memory space in the memory at the other wireless node;~~

~~a~~ a processing system configured to determine a number of data units to be transmitted to the other wireless node based on the ~~indication of the amount of free memory space and the one or more parameters; and~~

~~one~~ one or more parameters specifying the memory at the other wireless node, and the indication of the amount of computed free memory space when the free memory space is less than the amount of memory for the aggregated data unit having the maximum length, the indication of no space available in the memory when zero space is available in the memory, and the indication that there is sufficient space in the memory for the aggregated data unit having the maximum length; and a transmitter configured to transmit data units to the other wireless node, wherein a number of the data units transmitted to the other wireless node equals the determined number of data units.

~~66.~~ 13. An apparatus for wireless communications, comprising:

~~an~~ an interface configured to output one or more parameters for transmission to a wireless node, the one or more parameters specifying a memory; and

~~a~~ a processing system configured to compute an amount of computed free memory space in the memory;

~~wherein~~ wherein the interface is further configured to output an indication of the amount of ~~free memory space for transmission to the wireless node.~~ computed free memory space for transmission to the wireless node in a block acknowledgement (BA) frame including a receiver buffer capacity (RBUFCAP) field that is configured to include the indication of the amount of free memory space in the memory when the computed free memory space is less than an amount of memory for an aggregated data unit having a maximum length, an indication of no space available in the memory when zero space is available in the memory, and an indication that there is sufficient space in the memory for the aggregated data unit having the maximum length.

~~67.~~ 14. The apparatus of claim ~~66~~13, wherein the one or more parameters include a parameter indicating a size of a memory unit, and the indication of the amount of free memory space is given in terms of the memory unit.

~~68.~~ 15. The apparatus of claim ~~67~~14, wherein the processing system is configured to compute the size of the memory unit based on a size of the memory, and a range of ~~a~~the receiver buffer capacity (RBUFCAP) field.

~~69.~~ 16. The apparatus of claim ~~66~~13, wherein:

~~the~~ the processing system is further configured to generate a block acknowledgement frame that comprises the indication of the amount of free memory space; and

~~the~~ the interface is further configured to output the block acknowledgement frame for transmission to the wireless node.

~~70. The apparatus of claim 69, wherein the indication of the amount of free memory space is in a receiver buffer capacity (RBUFCAP) field of the block acknowledgement frame.~~

~~71. The apparatus of claim 70, wherein the RBUFCAP field has a first value to indicate no space in the memory, or a second value to indicate unlimited space in the memory.~~

~~72. The apparatus of claim 69, wherein:~~
~~the~~ the interface is further configured to receive a block acknowledgement request from the wireless node; and
~~the~~ the processing system is further configured to generate the block acknowledgement frame in response to the block acknowledgement request.

~~73.~~ 17. The apparatus of claim ~~69~~13, wherein the processing system is configured to generate the block acknowledgement frame unsolicited by the wireless node.

~~74.~~ 18. The apparatus of claim ~~73~~13, wherein ~~the processing system is further configured to:~~
~~track a change in the amount of free memory space in the memory;~~
~~compare the change with a threshold; and~~
~~generate the block acknowledgement frame if the change is equal to or exceeds the threshold.~~

~~75. The apparatus of claim 66, wherein:~~
~~:~~ the interface is further configured to receive an add block acknowledgement (ADDBA) request from the wireless node, the ADDBA request requesting a block acknowledgement session with the wireless node;
~~the~~ the processing system is further configured to generate an ADDBA response in response to the ADDBA request, wherein the ADDBA response comprises the one or more parameters; and
~~the~~ the interface is further configured to output the ADDBA response for transmission to the wireless node.

~~76.~~ 19. The apparatus of claim ~~66~~18, wherein~~:~~
~~the processing system is further configured to generate an add traffic (ADDTS) request that comprises~~ the one or more parameters~~;~~
~~the interface is further configured to output the add traffic (ADDTS) request for transmission to the wireless node; and~~
~~the interface is further configured to receive, from the wireless node, an ADDTS~~ in the ADDBA response ~~acknowledging the ADDTS request~~include a type of the memory in the wireless node, and a size of a memory unit used in the RBUFCAP.

~~77.~~ 20. The apparatus of claim ~~66~~13, wherein the processing system is configured to compute the amount of free memory space by tracking an amount of data going into the memory and an amount of data being released from the memory.

~~78.~~ 21. The apparatus of claim ~~66~~13, wherein the memory comprises a plurality of buffers, and the one or more parameters include a buffer size and a limit on a number of data units per buffer.

~~79.~~ 22. The apparatus of claim ~~66, wherein the one or more parameters include parameters for a plurality of different memory types.~~

~~80. The apparatus of claim 79, wherein the plurality of different memory types includes a first-in first-out (FIFO) memory and a buffered memory.~~

~~81. The apparatus of claim 79, wherein the interface is further configured to output an indicator for transmission to the wireless node, the indicator indicating one of the plurality of different memory types.~~

~~82. The apparatus of claim 81, wherein the interface is further configured to output a block acknowledgement for transmission to the wireless node, the block acknowledgement comprising the indicator indicating the one of the plurality of different memory types.~~

~~83. The apparatus of claim 66, wherein:~~
~~the interface is further configured to output a plurality of traffic identifiers for transmission to the wireless node, each of the traffic identifiers identifying a respective data traffic; and~~
~~the interface is further configured to receive data units from the wireless node via at least one of the identified data traffics.~~

~~84. The apparatus of claim 66~~13, wherein the memory comprises a plurality of buffers, and the one or more parameters include a parameter indicating whether a single data unit may be split between two or more of the plurality of buffers.

~~85.~~ 23. The apparatus of claim ~~66~~13, wherein the interface is further configured to output a capabilities element for transmission to the wireless node, the capabilities element indicating one or more capabilities of the apparatus.

~~86.~~ 24. The apparatus of claim ~~66~~13, wherein the interface is further configured to output ~~an add block acknowledgement response for transmission to the wireless node, the add block acknowledgement response including a dialog token set to zero if the add block acknowledgement response is not solicited by an add block acknowledgement request requesting a block acknowledgement session.~~

~~87. The apparatus of claim 66, wherein:~~
~~wherein the interface is further configured to output another indication for transmission to the wireless node, the other indication indicating:~~
~~another amount of free memory space at the apparatus;~~
~~that no space is available in the memory; or~~

that there is sufficient space in the memory for an aggregated data unit having a maximum length.

88. The apparatus of claim 87, wherein:

the one or more parameters include a parameter indicating a size of a memory unit; and

the indication of the other amount of free memory space is given in terms of the memory unit.

89. A method for wireless communications, comprising:

outputting one or more parameters for transmission to a wireless node, the one or more parameters specifying a memory;

computing an amount of free memory space in the memory;

outputting an indication of the amount of free memory space for transmission to the wireless node.

90. The method of claim 89, wherein the one or more parameters include a parameter indicating a size of a memory unit, and the indication of the amount of free memory space is given in terms of the memory unit.

91. The method of claim 90, further comprising computing the size of the memory unit based on a size of the memory, and a range of a receiver buffer capacity (RBUFCAP) field.

92. The method of claim 89, further comprising:

generating a block acknowledgement frame that comprises the indication of the amount of free memory space; and

outputting the block acknowledgement frame for transmission to the wireless node.

93. The method of claim 92, wherein the indication of the amount of free memory space is in a receiver buffer capacity (RBUFCAP) field of the block acknowledgement frame.

94. The method of claim 93, wherein the RBUFCAP field has a first value to indicate no space in the memory, or a second value to indicate unlimited space in the memory.

95. The method of claim 92, further comprising:

receiving a block acknowledgement request from the wireless node;

wherein the block acknowledgement frame is generated in response to the block acknowledgement request.

96. The method of claim 92, wherein the block acknowledgement frame is generated unsolicited by the wireless node.

97. The method of claim 96, further comprising:

tracking a change in the amount of free memory space in the memory; and

comparing the change with a threshold;

wherein the block acknowledgement frame is generated if the change is equal to or exceeds the threshold.

98. The method of claim 89, further comprising:

receiving an add block acknowledgement (ADDBA) request from the wireless node, the ADDBA request requesting a block acknowledgement session with the wireless node; and

generating an ADDBA response in response to the ADDBA request, wherein the ADDBA response comprises the one or more parameters; and

outputting the ADDBA response for transmission to the wireless node.

99. The method of claim 89, further comprising:

generating an add traffic (ADDTS) request that comprises the one or more parameters;

outputting the add traffic (ADDTS) request for transmission to the wireless node; and

receiving, from the wireless node, an ADDTS response acknowledging the ADDTS request.

100. The method of claim 89, wherein computing the amount of free memory space includes tracking an amount of data going into the memory and an amount of data being released from the memory.

101. The method of claim 89, wherein the memory comprises a plurality of buffers, and the one or more parameters includes a buffer size and a limit on a number of data units per buffer.

102. The method of claim 89, wherein the one or more parameters include parameters for a plurality of different memory types.

103. The method of claim 102, wherein the plurality of different memory types includes a first-in first-out (FIFO) memory and a buffered memory.

104. The method of claim 102, further comprising outputting an indicator for transmission to the wireless node, the indicator indicating one of the plurality of different memory types.

105. The method of claim 104, further comprising outputting a block acknowledgement for transmission to the wireless node, the block acknowledgement comprising the indicator indicating the one of the plurality of different memory types.

106. The method of claim 89, further comprising:

outputting a plurality of traffic identifiers for transmission to the wireless node, each of the traffic identifiers identifying a respective data traffic; and

receiving data units from the wireless node via at least one of the identified data traffics.

~~107. The method of claim 89, wherein the memory comprises a plurality of buffers, and the one or more parameters include a parameter indicating whether a single data unit may be split between two or more of the plurality of buffers.~~

~~108. The method of claim 89, further comprising outputting a capabilities element for transmission to the wireless node, the capabilities element indicating one or more capabilities of the apparatus.~~

~~109. The method of claim 89, further comprising outputting~~ an add block acknowledgement response for transmission to the wireless node, the add block acknowledgement response including a dialog token set to zero ~~if~~when the add block acknowledgement response is not solicited by an add block acknowledgement request requesting a block acknowledgement session.

~~110.~~ 25. The ~~method~~apparatus of claim ~~89~~13, further comprising~~:~~

~~outputting another indication for transmission~~ a transmitter configured to transmit the one or more parameters to the wireless node, ~~the other indication indicating:~~

~~another amount of free memory space at~~wherein the apparatus~~;~~

~~that no space is available in the memory; or~~

~~that there is sufficient space in the memory for an aggregated data unit having a maximum length.~~

~~111. The method of claim 110, wherein:~~

~~the one or more parameters include a parameter indicating a size of a memory unit; and~~

~~the indication of the other amount of free memory space is given in terms of the memory unit.~~

~~112. An apparatus for wireless communications, comprising:~~

~~means for outputting one or more parameters for transmission to a~~ is configured as another wireless node~~, the one or more parameters specifying a memory;~~

~~means for computing an amount of free memory space in the memory;~~

~~means for outputting an indication of the amount of free memory space for transmission to the wireless node.~~

~~113. The apparatus of claim 112, wherein the one or more parameters include a parameter indicating a size of a memory unit, and the indication of the amount of free memory space is given in terms of the memory unit.~~

~~114. The apparatus of claim 113, further comprising means for computing the size of the memory unit based on a size of the memory, and a range of a receiver buffer capacity (RBUFCAP) field.~~

115. The apparatus of claim 112, further comprising:

means for generating a block acknowledgement frame that comprises the indication of the amount of free memory space; and

means for outputting the block acknowledgement frame for transmission to the wireless node.

116. The apparatus of claim 115, wherein the indication of the amount of free memory space is in a receiver buffer capacity (RBUFCAP) field of the block acknowledgement frame.

117. The apparatus of claim 116, wherein the RBUFCAP field has a first value to indicate no space in the memory, or a second value to indicate unlimited space in the memory.

118. The apparatus of claim 115, further comprising means for receiving a block acknowledgement request from the wireless node, wherein the block acknowledgement frame is generated in response to the block acknowledgement request.

119. The apparatus of claim 115, wherein the block acknowledgement frame is generated unsolicited by the wireless node.

120. The apparatus of claim 119, further comprising:

means for tracking a change in the amount of free memory space in the memory; and

means for comparing the change with a threshold;

wherein the block acknowledgement frame is generated if the change is equal to or exceeds the threshold.

121. The apparatus of claim 112, further comprising:

means for receiving an add block acknowledgement (ADDBA) request from the wireless node, the ADDBA request requesting a block acknowledgement session with the wireless node;

means for generating an ADDBA response in response to the ADDBA request, wherein the ADDBA response comprises the one or more parameters; and

means for outputting the ADDBA response for transmission to the wireless node.

122. The apparatus of claim 112, further comprising:

means for generating an add traffic (ADDTS) request that comprises the one or more parameters;

means for outputting the add traffic (ADDTS) request for transmission to the wireless node; and

means for receiving, from the wireless node, an ADDTS response acknowledging the ADDTS request.

123. The apparatus of claim 112, wherein the means for computing the amount of free memory space includes means for tracking an amount of data going into the memory and an amount of data being released from the memory.

~~124. The apparatus of claim 112, wherein the memory comprises a plurality of buffers, and the one or more parameters includes a buffer size and a limit on a number of data units per buffer.~~

~~125. The apparatus of claim 112, wherein the one or more parameters include parameters for a plurality of different memory types.~~

~~126. The apparatus of claim 125, wherein the plurality of different memory types includes a first-in first-out (FIFO) memory and a buffered memory.~~

~~127. The apparatus of claim 125, further comprising means for outputting an indicator for transmission to the wireless node, the indicator indicating one of the plurality of different memory types.~~

~~128. The apparatus of claim 127, further comprising means for outputting a block acknowledgement for transmission to the wireless node, the block acknowledgement comprising the indicator indicating the one of the plurality of different memory types.~~

~~129. The apparatus of claim 112, further comprising:~~
~~means for outputting a plurality of traffic identifiers for transmission to the wireless node, each of the traffic identifiers identifying a respective data traffic; and~~
~~means for receiving data units from the wireless node via at least one of the identified data traffics.~~

~~130. The apparatus of claim 112, wherein the memory comprises a plurality of buffers, and the one or more parameters include a parameter indicating whether a single data unit may be split between two or more of the plurality of buffers.~~

~~131. The apparatus of claim 112, further comprising means for outputting a capabilities element for transmission to the wireless node, the capabilities element indicating one or more capabilities of the apparatus.~~

~~132. The apparatus of claim 112, further comprising means for outputting an add block acknowledgement response for transmission to the wireless node, the add block acknowledgement response including a dialog token set to zero if the add block acknowledgement response is not solicited by an add block acknowledgement request requesting a block acknowledgement session.~~

~~133. The apparatus of claim 112, further comprising:~~
~~means for outputting another indication for transmission to the wireless node, the other indication indicating:~~
~~another amount of free memory space at the apparatus;~~
~~that no space is available in the memory; or~~

that there is sufficient space in the memory for an aggregated data unit having a maximum length.

134. The apparatus of claim 133, wherein:

the one or more parameters include a parameter indicating a size of a memory unit; and

the indication of the other amount of free memory space is given in terms of the memory unit.

135. A computer readable medium comprising instructions stored thereon for:

outputting one or more parameters for transmission to a wireless node, the one or more parameters specifying a memory;

computing an amount of free memory space in the memory; and

outputting an indication of the amount of free memory space for transmission to the wireless node.

136. A wireless node, comprising:

a transmitter configured to transmit one or more parameters to another wireless node, the one or more parameters specifying a memory; and

a processing system configured to compute an amount of free memory space in the memory;

wherein the transmitter is further configured to transmit an indication of the amount of free memory space to the other wireless node.