

What Is Claimed Is:

1. A method to report link quality measurements for downlink dual carrier operation, the method comprising:

dependent on at least in part a length of an information element to contain link quality measurements for a secondary carrier being less than or equal to a first limit, using a first value in a first range of numeric values greater than a second limit to represent the length of the information element;

dependent on at least in part the length of the information element to contain the link quality measurements for the secondary carrier being greater than the first limit, using a second value in a second range of numeric values less than or equal to the second limit to represent the length of the information element; and

setting a length field of a message containing the information element to the first value or the second value to signal the length of the information element.

2. A method as defined in claim 1 wherein the information element is an extension information element of a packet downlink ack/nack message.

3. A method as defined in claims 1 or 2 wherein the first limit is one greater than a maximum numeric value able to be represented by the length field, and the second limit is less than a minimum possible size of the information element.

4. A method as defined in any one of claims 1 to 3 wherein the first value, when incremented by one, is to equal the length of the information element.

5. A method as defined in any one of claims 1 to 4 wherein the second value, when incremented by an offset greater than the first limit, is to equal the length of the information element.

6. A method as defined in any one of claims 1 to 4 wherein the second value is mapped to the length of the information element.

7. A method to report link quality measurements for downlink dual carrier operation, the method comprising:
- including link quality measurements for a first carrier and a second carrier in a packet downlink ack/nack message to be sent to a network; and
 - omitting an information element of the packet downlink ack/nack message that is specified to contain ack/nack information.
8. A method as defined in claim 7 wherein omitting the information element is dependent on at least in part that no valid form of the information element does fit in the packet downlink ack/nack message when the link quality measurements are also to be included in the packet downlink ack/nack message.
9. A method as defined in any claims 7 or 8 wherein the packet downlink ack/nack message is an EGPRS packet downlink ack/nack type 2 message.
10. A method to report link quality measurements for downlink dual carrier operation, the method comprising:
- determining link quality measurements to report for a secondary carrier; and
 - including the link quality measurements to report for the secondary carrier in a channel report information element not located in an extension information element of a packet downlink ack/nack message.
11. A method as defined in claim 10 wherein the packet downlink ack/nack message is an EGPRS packet downlink ack/nack type 2 message.
12. A method to report link quality measurements for downlink dual carrier operation, the method comprising:
- dependent on at least in part that link quality measurements to report for downlink dual carrier operation in an EGPRS packet downlink ack/nack message do not fit in the EGPRS packet downlink ack/nack message, including the link quality measurements in an EGPRS packet downlink ack/nack type 2 message to be sent to a network.

13. A method as defined in claim 12 further comprising determining whether the link quality measurements to report for downlink dual carrier operation fit in the EGPRS packet downlink ack/nack message.

14. An article of manufacture storing machine readable instructions which, when executed, cause a machine to perform the method defined in any one of claims 1 to 13.

15. An apparatus comprising a processor configured to perform the method defined in any one of claims 1 to 13.

What Is Claimed Is:

1. A method to report link quality measurements for downlink dual carrier operation, the method comprising:

5 dependent on at least in part a length of an information element (325) to contain link quality measurements for a secondary carrier (210) being less than or equal to a first limit, using a first value in a first range of numeric values greater than a second limit to represent the length of the information element (325);

10 dependent on at least in part the length of the information element (325) to contain the link quality measurements for the secondary carrier (210) being greater than the first limit, using a second value in a second range of numeric values less than or equal to the second limit to represent the length of the information element (325), at least one of the first range of numeric values or the second range of numeric values including more than one numeric value; and

15 setting a length field (330) of a message (300) containing the information element (325) to the first value or the second value to signal the length of the information element (325).

2. A method as defined in claim 1, wherein the information element (325) is an extension information element of a packet downlink ack/nack message.

20 3. A method as defined in claim 1, wherein the information element (325) is an extension information element of an EGPRS PACKET DOWNLINK ACK/NACK message.

4. A method as defined in any one of claims 1 to 3, wherein the first limit is one greater than a maximum numeric value able to be represented by the length field (330),
25 and the second limit is less than a minimum possible size of the information element (325).

5. A method as defined in any one of claims 1 to 4, wherein the first value, when incremented by one, is to equal the length of the information element (325).

6. A method as defined in any one of claims 1 to 5, wherein the second value, when incremented by an offset greater than the first limit, is to equal the length of the information element (325).
7. A method as defined in any one of claims 1 to 5, wherein the second value is mapped to the length of the information element (325).
8. A method as defined in any one of claims 1 to 7, wherein the first limit is 64.
9. A method as defined in any one of claims 1 to 8, wherein the second limit is 5.
10. A method as defined in any one of claims 1 to 9, wherein the first range of values includes numeric values ranging from 6 to 63.
- 10 11. A method as defined in any one of claims 1 to 10, wherein the second range of values includes numeric values ranging from 0 to 5.
12. An article of manufacture storing machine readable instructions which, when executed, cause a machine to perform the method defined in any one of claims 1 to 11.
13. An apparatus comprising a processor configured to perform the method defined in
15 any one of claims 1 to 11.