PUSCH ACK/NAK resources are dimensioned according to M; and (iii) ACK/NAK decoding at eNB **2** is based on:

$$b_i = \sum_{n=0}^{L-1} (a_n \cdot M_{i,n}) \bmod 2.$$

[0068] The same is true for the situation in which eNB reconfigures itself for transmissions to UE **8** on a reduced number of CCs.

[0069] One alternative technique is illustrated in FIGS. **6** and **7**, from the points of view of eNB **2** and UE **8**, respectively.

[0070] After configuring itself for transmissions to UE on a new number of CCs (STEP **602**), and during at least the period in which eNB **2** cannot be certain that UE has also reconfigured itself for receiving transmissions on the new number of CCs, eNB **2** includes (STEP **604**) with MAC-level scheduling information transmitted on PDCCH an indication of the number of basis code sequences (i.e. codebook size) that should be used for encoding the ACK/NACK information to be transmitted from UE **8** to eNB **2** on PUSCH. This can be done by setting bit(s) or codepoint in at least one DL or UL resource allocation grant on PDCCH. UE **8** monitors PDCCH for transmissions addressed to it, and detects the scheduling information and the above-mentioned codebook size information (STEP **702**). UE **8** encodes the ACK/NACK bits according to the codebook size indicated on PDCCH, regardless of the number of CCs for which it is configured to receive DL transmissions from eNB **2** (STEP **704**). UE **8** transmits the encoded ACK/NACK bits on PUSCH via resources for which it has received scheduling information on PDCCH (STEP **706**). eNB **2** receives the encoded ACK/NACK bits on PUSCH (STEP **606**); and decodes the encoded ACK/NACK bits according to the codebook size indicated to UE **8** via PDCCH, regardless of the number of CCs on which eNB **2** is configured to make transmissions to UE **8**.

[0071] If UE **8** does detect the scheduling information on PDCCH, then it also has the codebook size information, and there is no concern about any lack of synchronization between the UE **8** and eNB **2** in respect to the codebook size to be used for encoding and decoding the ACK/NCK information. On the other hand, if UE **8** happens not to detect the codebook size information on PDCCH, then it will also not have detected the scheduling information with which the codebook size information was included. Accordingly, there would then be no ACK/NACK information sent from UE **8** to eNB **2**, and there is no concern about what codebook size to use at eNB **2**.

[0072] The kind of technique described above can also be used in other kinds of situations where a transmission parameter depends on the configuration of the UE **8**, and there is uncertainty at eNB **2** about the configuration of UE **8**, such as for example, in an initial period after instructing a reconfiguration of PUCCH transmissions from 1-antenna port mode to Tx diversity mode.

[0073] The above-description of techniques is set in the context of transmitting encoded ACK/NACK information on PUSCH. However the same kind of techniques also have application, for example, to the transmission of encoded ACK/NACK information via the Physical Uplink Control Channel (PUCCH) according to discrete fourier transform spread orthogonal frequency divisional multiplexing (DFT-s-OFDM). PUCCH is used by UE **8** for sending control information such as ACK/NACK information when UE **8** is not allocated any resources for sending user data on PUSCH; and there is no multiplexing of the ACK/NACK information with user data on PUCCH. It is also possible to configure control signalling in such a way that ACK/NACK information is always transmitted on PUCCH regardless of the presence of user data on PUSCH.

[0074] The above-described operations may require data processing in the various entities. The data processing may be provided by means of one or more data processors. Similarly various entities described in the above embodiments may be implemented within a single or a plurality of data processing entities and/or data processors. Appropriately adapted computer program code product may be used for implementing the embodiments, when loaded to a computer. The program code product for providing the operation may be stored on and provided by means of a carrier medium such as a carrier disc, card or tape. A possibility is to download the program code product via a data network. Implementation may be provided with appropriate software in a server.

[0075] For example the embodiments may be implemented as a chipset, in other words a series of integrated circuits communicating among each other. The chipset may comprise microprocessors arranged to run code, application specific integrated circuits (ASICs), or programmable digital signal processors for performing the operations described above.

[0076] Embodiments may be practiced in various components such as integrated circuit modules. The design of integrated circuits is by and large a highly automated process. Complex and powerful software tools are available for converting a logic level design into a semiconductor circuit design ready to be etched and formed on a semiconductor substrate.

[0077] Programs, such as those provided by Synopsys, Inc. of Mountain View, Calif. and Cadence Design, of San Jose, Calif. automatically route conductors and locate components on a semiconductor chip using well established rules of design as well as libraries of pre-stored design modules. Once the design for a semiconductor circuit has been completed, the resultant design, in a standardized electronic format (e.g., Opus, GOSH, or the like) may be transmitted to a semiconductor fabrication facility or "fab" for fabrication.

[0078] In addition to the modifications explicitly mentioned above, it will be evident to a person skilled in the art that various other modifications of the described techniques may be made, and that the described techniques have application in other communication systems.

1-30. (canceled)

31. A method comprising: for an initial period after informing a receiving device of a change in the number of carriers configured for transmissions from a transmitting device to the receiving device from a first carrier set to a second carrier set, wherein at least one of the first and second carrier sets contains a plurality of carriers: refraining from scheduling data transmissions to said receiving device on one or more carriers other than those common to both said first and second carrier sets; and decoding feedback information received from said receiving device using a number of code basis sequences according to the number of carriers common to both said first and second carrier sets.

32. A method according to claim **31**, comprising: for said initial period, receiving from said receiving device feedback information encoded using a number of code basis sequences