

subframe $n=0$ or downlink subframe $n=1$.

3. The method according to any one of claims 1-2, wherein at least one of the first set of values results in hybrid automatic repeat request (HARQ) acknowledgments (ACKs) being transmitted on physical uplink control channel (PUCCH) resources corresponding to downlink subframe $n=m-1$, wherein m is the relative index of the downlink subframe of the physical downlink shared channel (PDSCH) scheduled by enhanced physical downlink control channel (EPDCCH).

4. An apparatus, comprising:

means for defining acknowledgement (Ack)/negative acknowledgement (Nack) resource offset (ARO) values in time division duplex (TDD) with a first set of values and a second set of values;

wherein the first set of values contains negative values and is used to offset hybrid automatic repeat request (HARQ) acknowledgment (ACK) resource determination so that HARQ-ACK is transmitted on physical uplink control channel (PUCCH) resources corresponding to another downlink subframe, and

wherein the second set of values contains values between -2 and 2,
wherein, when $m=0$, the ARO values are $\{0, -2, -1, 2\}$,

wherein, when $m>0$, at least one of the first set of values allow for compressing hybrid automatic repeat request (HARQ) acknowledgments (ACKs) to a physical uplink control channel (PUCCH) resource region corresponding to downlink subframe $n<m$, wherein m is the relative index of the downlink subframe of the physical downlink shared channel (PDSCH) scheduled by enhanced physical downlink control channel (EPDCCH).