

ABSTRACT**ENCODING AND DECODING OF CONTROL INFORMATION FOR
WIRELESS COMMUNICATION**

Techniques for sending control information in a wireless communication system are described. In one design, a user equipment (UE) may map first information (e.g., CQI information) to M most significant bits (MSBs) of a message and may map second information (e.g., ACK information) to N least significant bits (LSBs) of the message if the second information is sent, where $M \geq 1$ and $N \geq 1$. The UE may encode the message with a block code, e.g., encode the M MSBs with the first M basis sequences of the block code and encode the N LSBs with the next N basis sequences of the block code. The second information may include N ACK bits. The UE may set each ACK bit to a first value for an ACK or to a second value for a NACK. The second value may also be used for discontinuous transmission (DTX) of ACK information.

Figure 4