ABSTRACT

CODING AND MULTIPLEXING OF CONTROL INFORMATION IN A WIRELESS COMMUNICATION SYSTEM

Techniques for sending control information in a wireless communication system are described. In an aspect, a UE spreads control information across frequency with a DFT and across time with an orthogonal sequence to obtain output data for the control information. In one design, the UE receives codewords for N HARQ processes in N downlink subframes, determines an ACK value for each HARQ process, codes N ACK values for the N HARQ processes to obtain ACK information, generates output data for the ACK information, and sends the output data in one of M uplink subframes. In another aspect, first control information is processed based on a first coding and multiplexing scheme utilizing code division multiplexing in time and frequency domains. Second control information is processed based on a second coding and multiplexing scheme utilizing code division multiplexing in time domain and spreading in frequency domain.

Figure 7