The BCC that is used is a 64-state, rate ½ code. The generator matrix for the code is given as

$$G = [D^6 + D^4 + D^3 + D + 1, \quad D^6 + D^5 + D^4 + D^3 + D^2 + 1]$$

or in octal notation, it is given by

$$G = [133, \quad 175]$$

Because the system is frame (PPDU) based, the encoder shall be in state zero (i.e., all memory elements contain zero at the beginning of each PPDU). The encoder must also be placed in a known state at the end of each PPDU to prevent the data bits near the end of the PPDU from being substantially less reliable than those early on in the PPDU. To place the encoder in a known state at the end of a PPDU, at least six deterministic bits must be input immediately following the last data bit input to the convolutional encoder. This is achieved by appending one octet containing all zeros to the end of the PPDU prior to transmission, and discarding the final octet of each received PPDU. In this manner, the decoding process can be completed reliably on the last data bits.

An encoder block diagram is shown in Figure 18-13. It consists of six memory elements. For every data bit input, two output bits are generated.

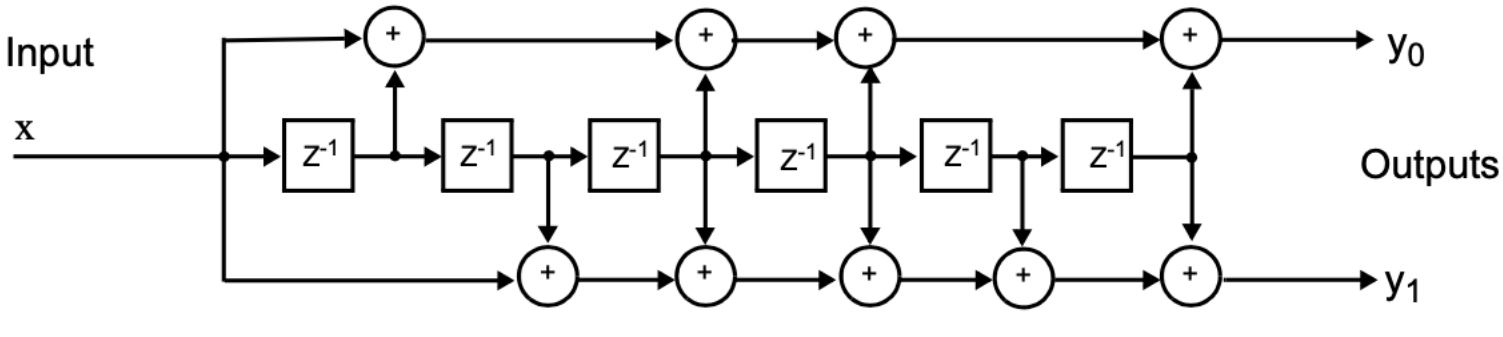

Figure 18-13—PBCC convolutional encoder