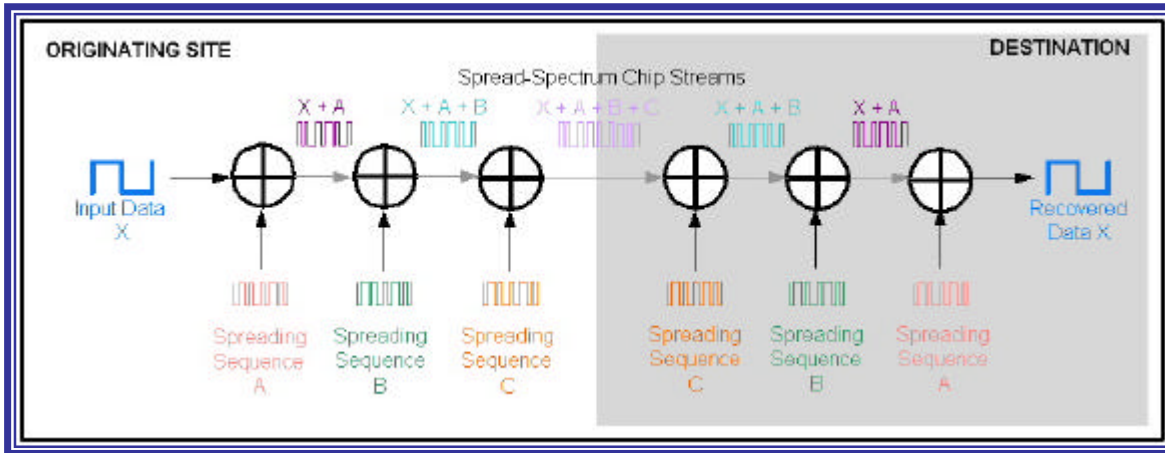


SPREADING SEQUENCES USED IN CDMA



Walsh Code - One of the 64 orthogonal bit pattern at a rate of 1.2288 Mcps. Walsh codes are used to identify the data for each individual transmission. In the forward link, they define forward code channels within a CDMA frequency. In the reverse link, all 64 codes are used by each reverse channel to carry information.

Short PN Codes – The two Short PN codes, I and Q, are 2^{15} (32,768) chips long at the rate of 1.2288 Mcps. They are defined for the purpose of identifying sectors of different base stations. In the forward link, they distinguish cells and sectors and participate in the quadrature spreading. In the reverse link, the short PN codes are used for quadrature spreading.

Long PN Codes – These codes are $2^{42}-1$ chips long generated at 1.2288 Mcps. They are defined for the purpose of uniquely identifying each possible reverse code channel. In the forward link, they scramble the data. In the reverse link, they define the reverse code channels within a CDMA frequency by means of unique offsets.

Reference:

1. CDMA Theory and Nortel Networks Product Design and Function, Student Guide, July 2000.
2. <http://www.zaborski.com/cdma/techterm.htm>