

Activity CDMA

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① 1.1) 2 stations

$$W_2 = \begin{bmatrix} +1 & +1 \\ +1 & -1 \end{bmatrix} \quad C_1 = [+1, +1] \quad C_2 = [+1, -1]$$

1.2) 4 Stations

$$W_4 = \begin{bmatrix} +1 & +1 & +1 & +1 \\ +1 & -1 & +1 & -1 \\ +1 & +1 & -1 & -1 \\ +1 & -1 & -1 & +1 \end{bmatrix}$$

$$C_1 = [+1, +1, +1, +1]$$

$$C_2 = [+1, -1, +1, -1]$$

$$C_3 = [+1, +1, -1, -1]$$

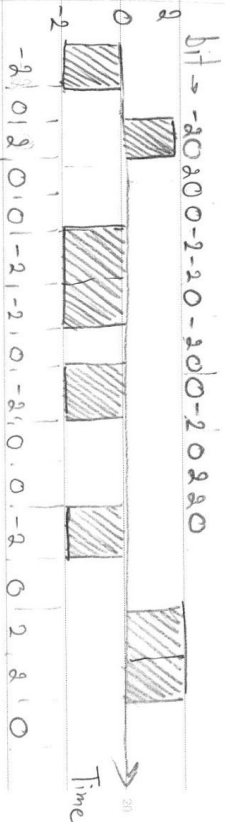
$$C_4 = [+1, -1, -1, +1]$$

② number of sequences = 188
max 90 station

③ Digital signal from two stations

S1: 01000011 bit^a 0: -1 bit^a 1: 1

S2: 01100101 C₁ = [+1, +1] C₂ = [+1, -1]



$$\text{bit 1: } C_1 = (1)(+1, +1) + (1)(+1, -1) = [2, 0]$$

$$\text{bit 2: } C_1 = (1)(+1, +1) + (-1)(+1, -1) = [0, 2]$$

$$\text{bit 3: } C_1 = (-1)(+1, +1) + (1)(+1, -1) = [0, -2]$$

$$\text{bit 4: } C_1 = (-1)(+1, +1) + (-1)(+1, -1) = [-2, 0]$$

$$\text{bit 5: } C_1 = (-1)(+1, +1) + (-1)(+1, -1) = [-2, 0]$$

$$\text{bit 6: } C_1 = (-1)(+1, +1) + (1)(+1, -1) = [0, -2]$$

$$\text{bit 7: } C_1 = (1)(+1, +1) + (1)(+1, -1) = [2, 0]$$

$$\text{bit 8: } C_1 = (-1)(+1, +1) + (-1)(+1, -1) = [-2, 0]$$