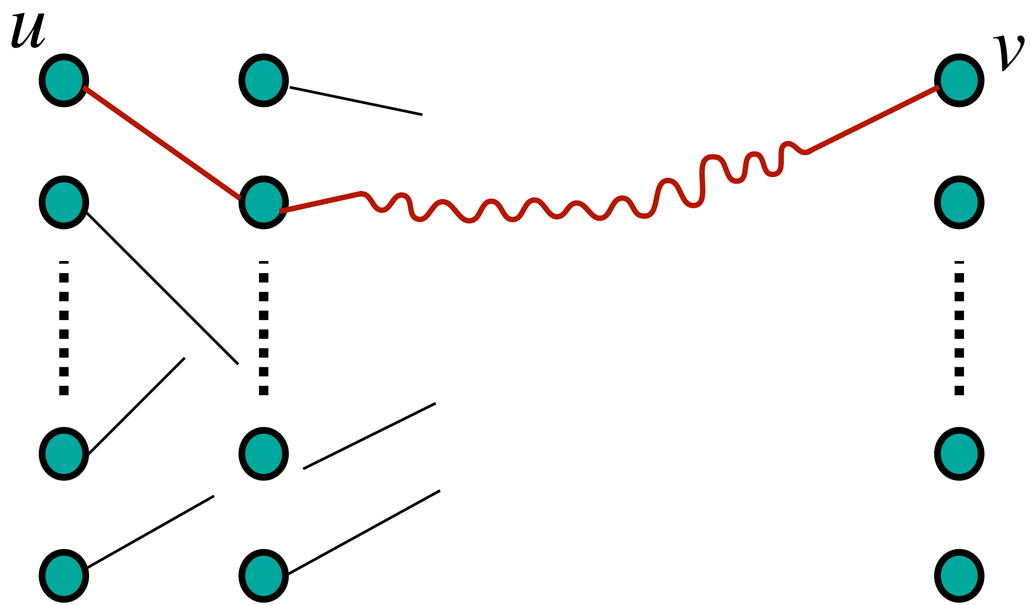
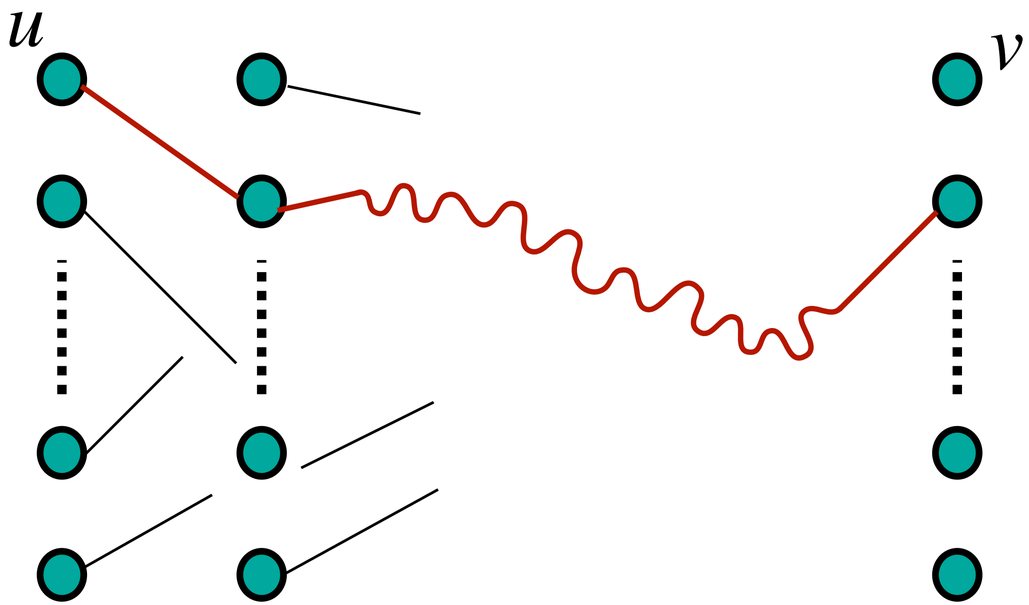
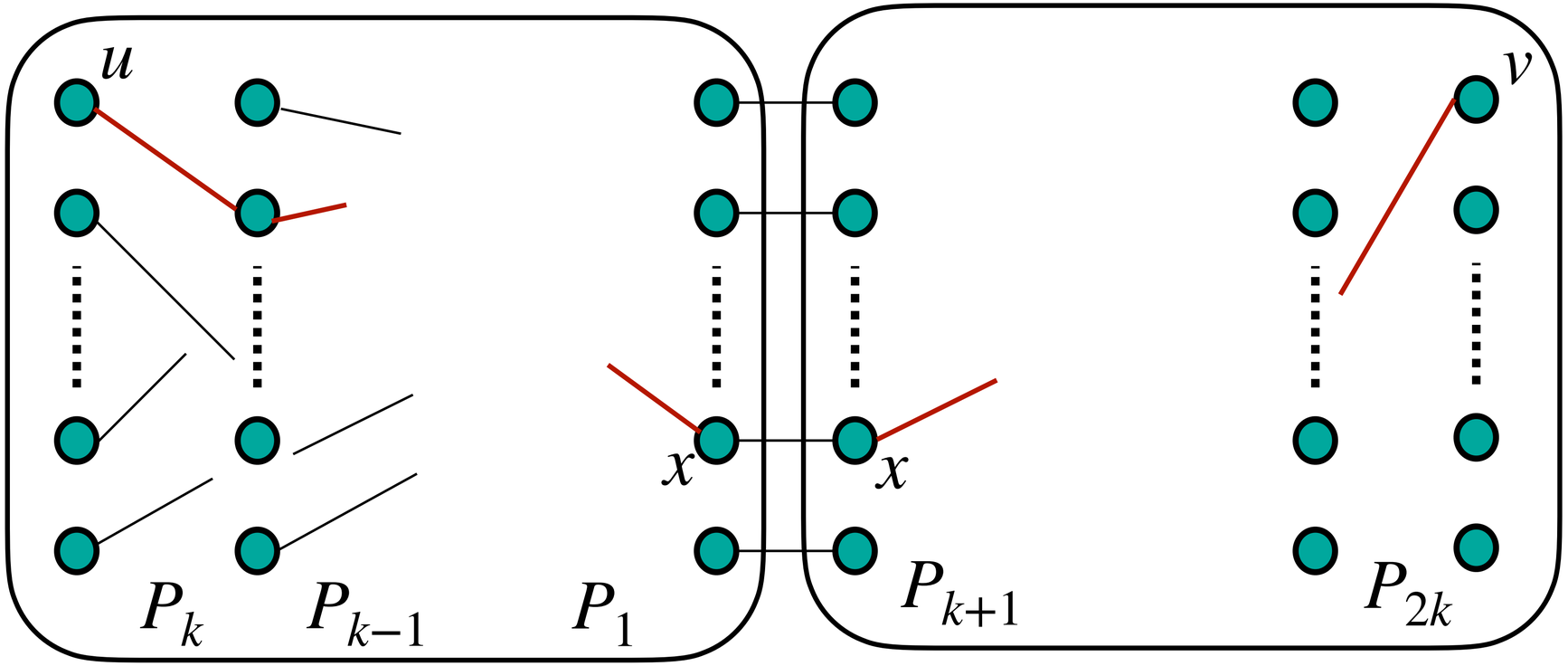
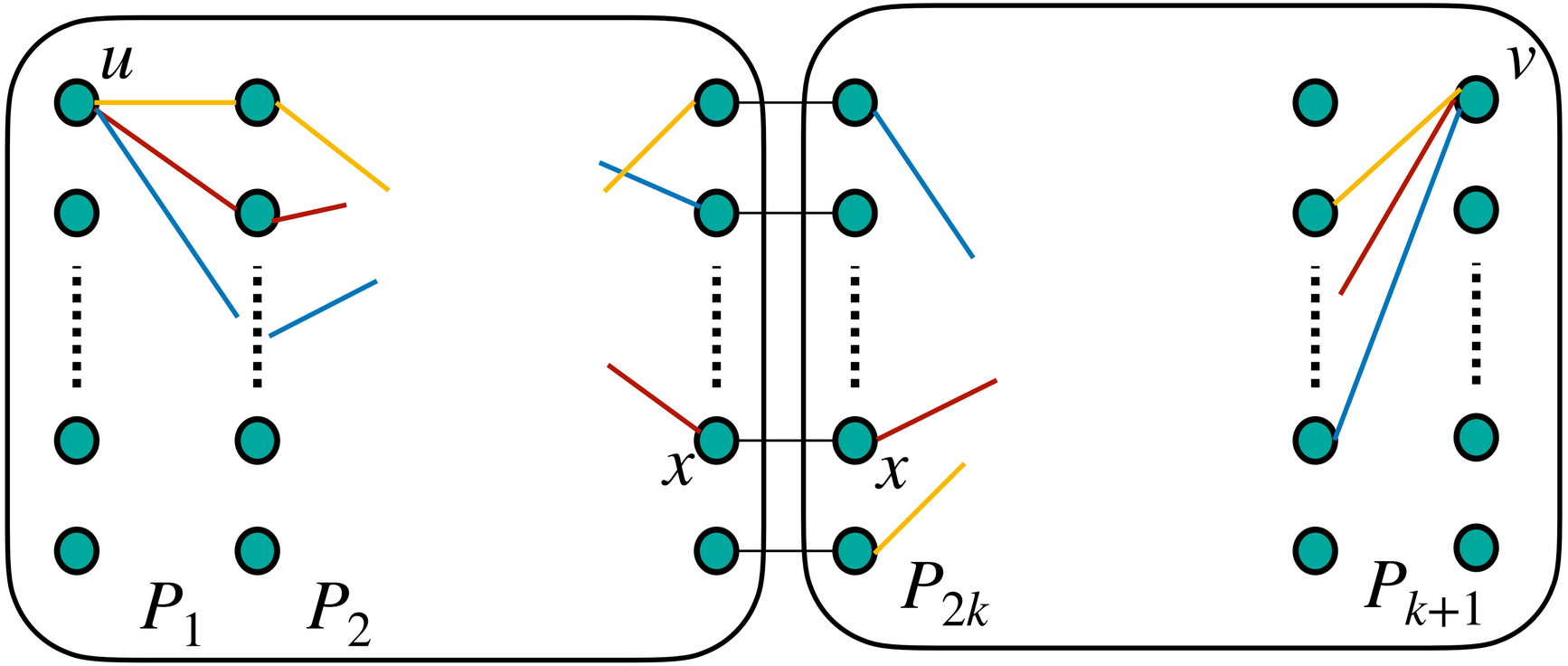

u
v

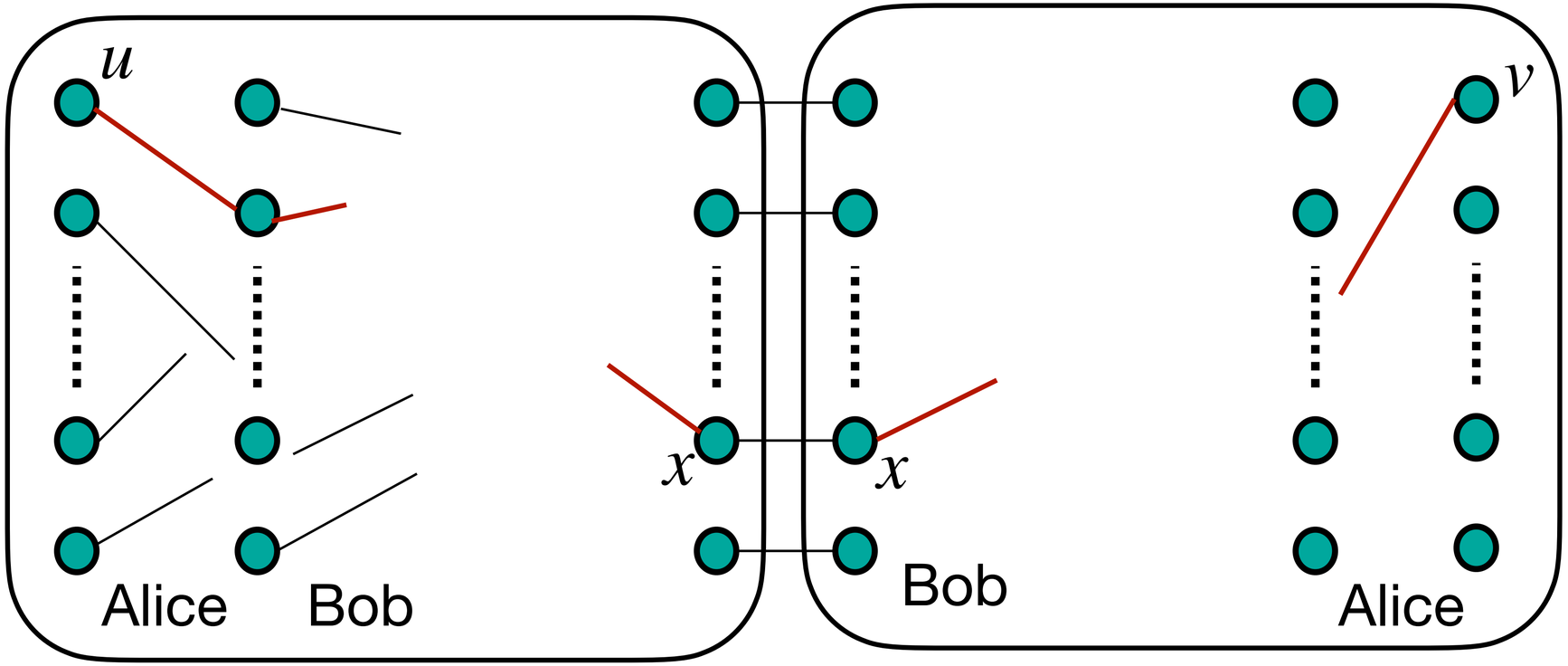

u
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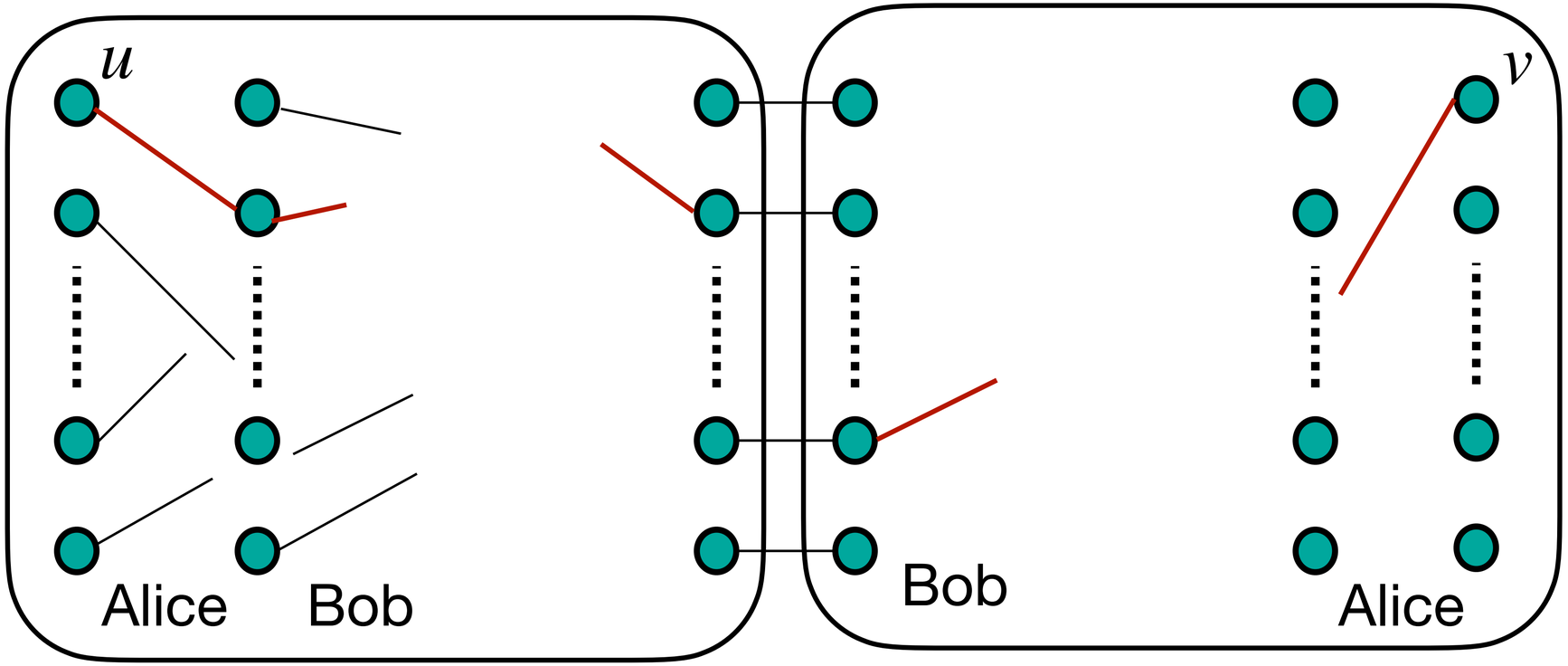


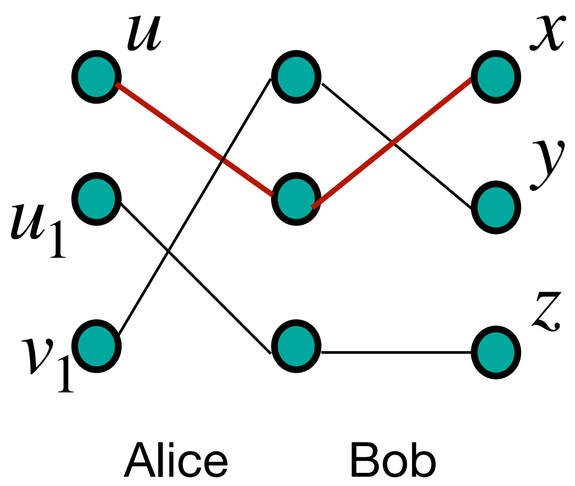
First Instance

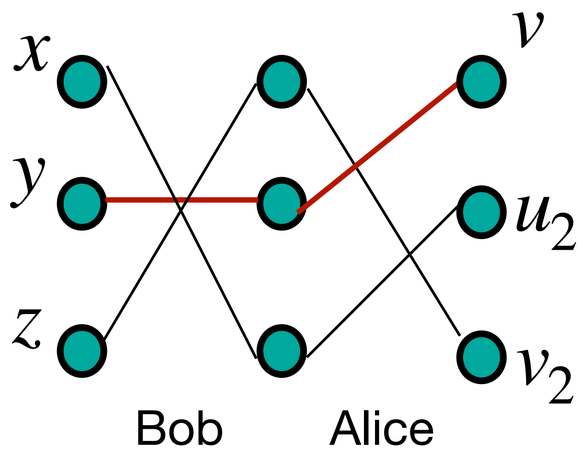
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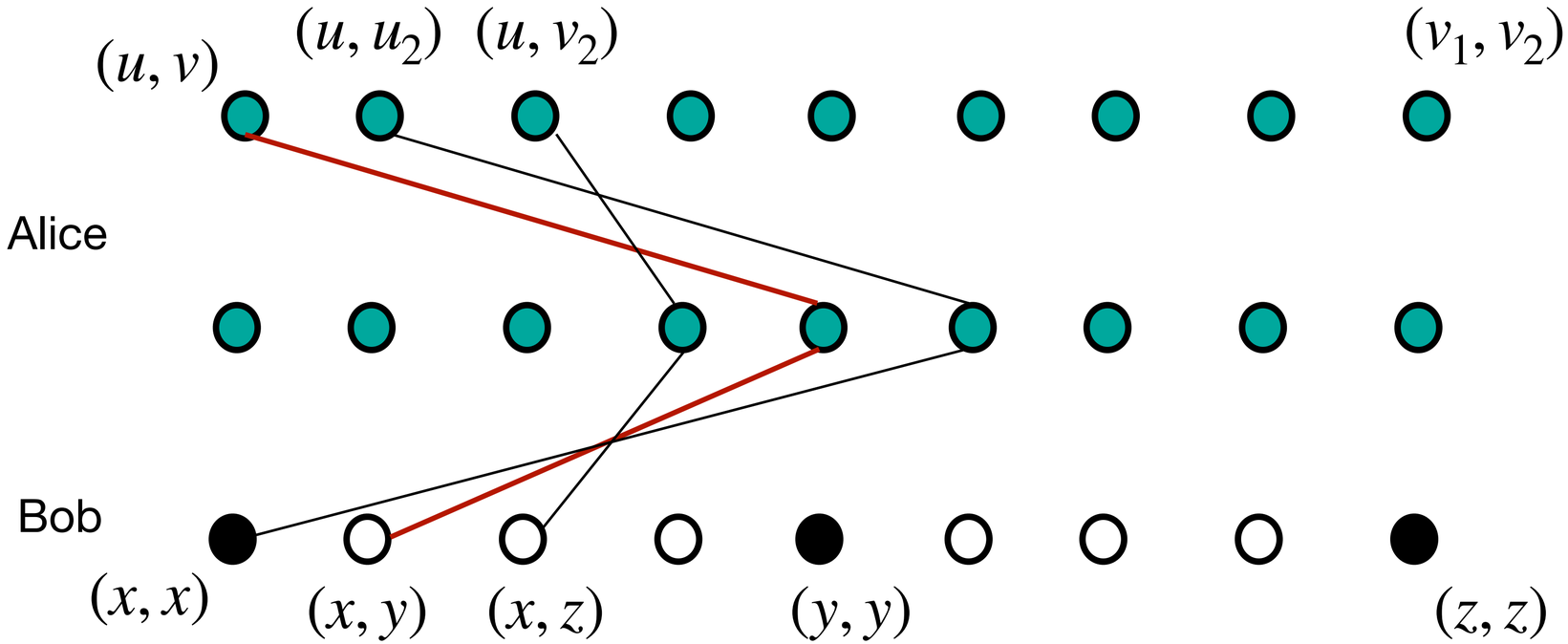

u
v
x
x
P_1
P_2
P_{2k}
P_{k+1}

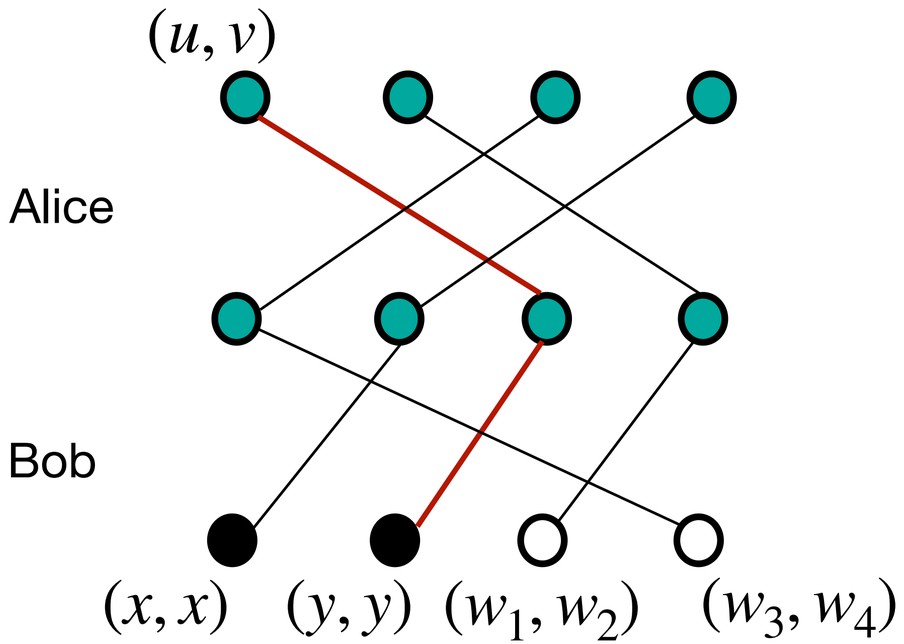

u
x
x
v
Alice
Bob
Bob
Alice

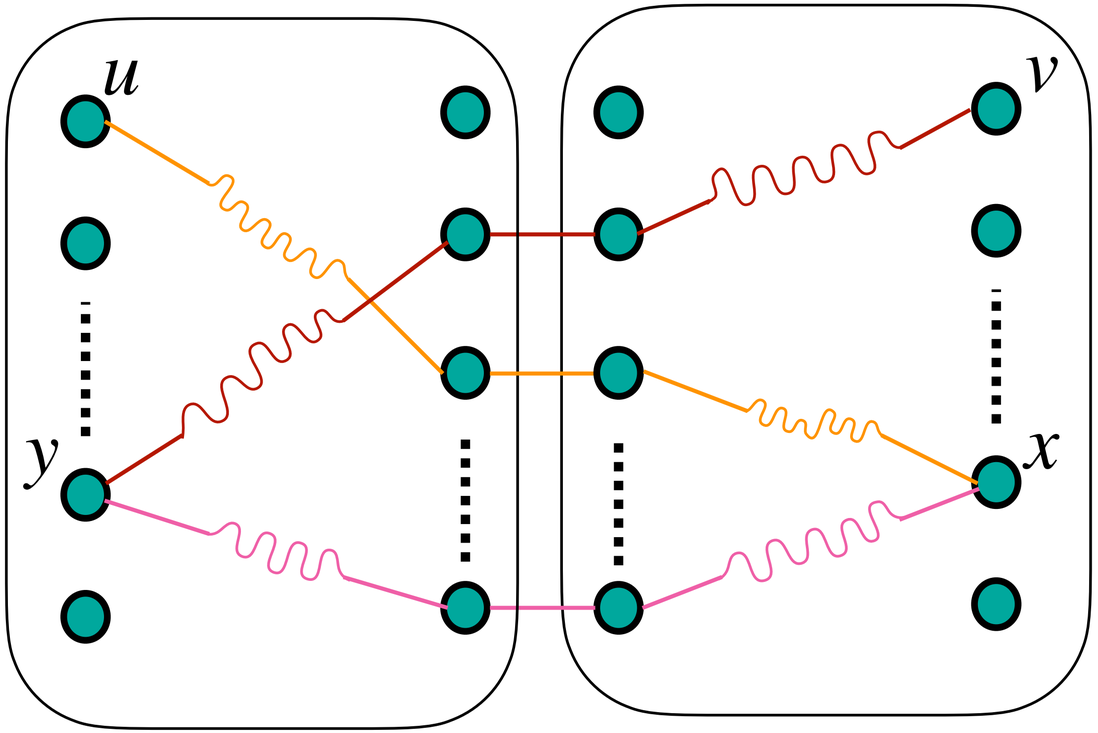

u
Alice
Bob
Bob
v
Alice

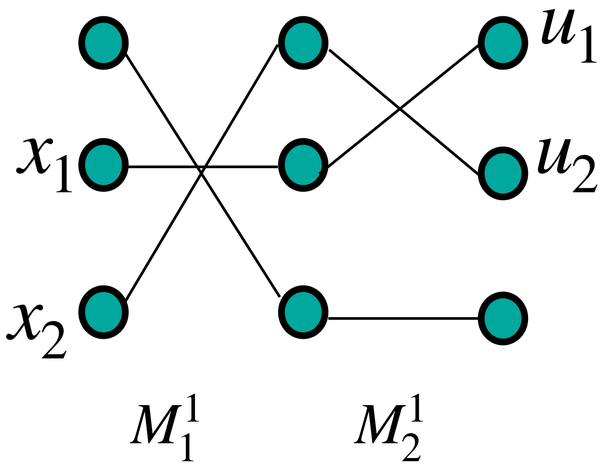

u
x
y
u_1
z
v_1
Alice
Bob

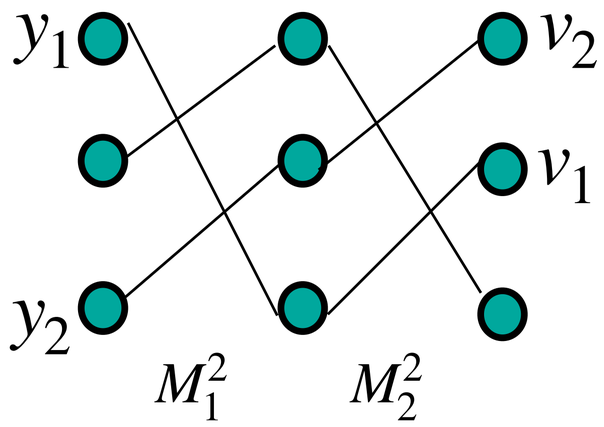

x
y
z
v
u_2
v_2
Bob
Alice

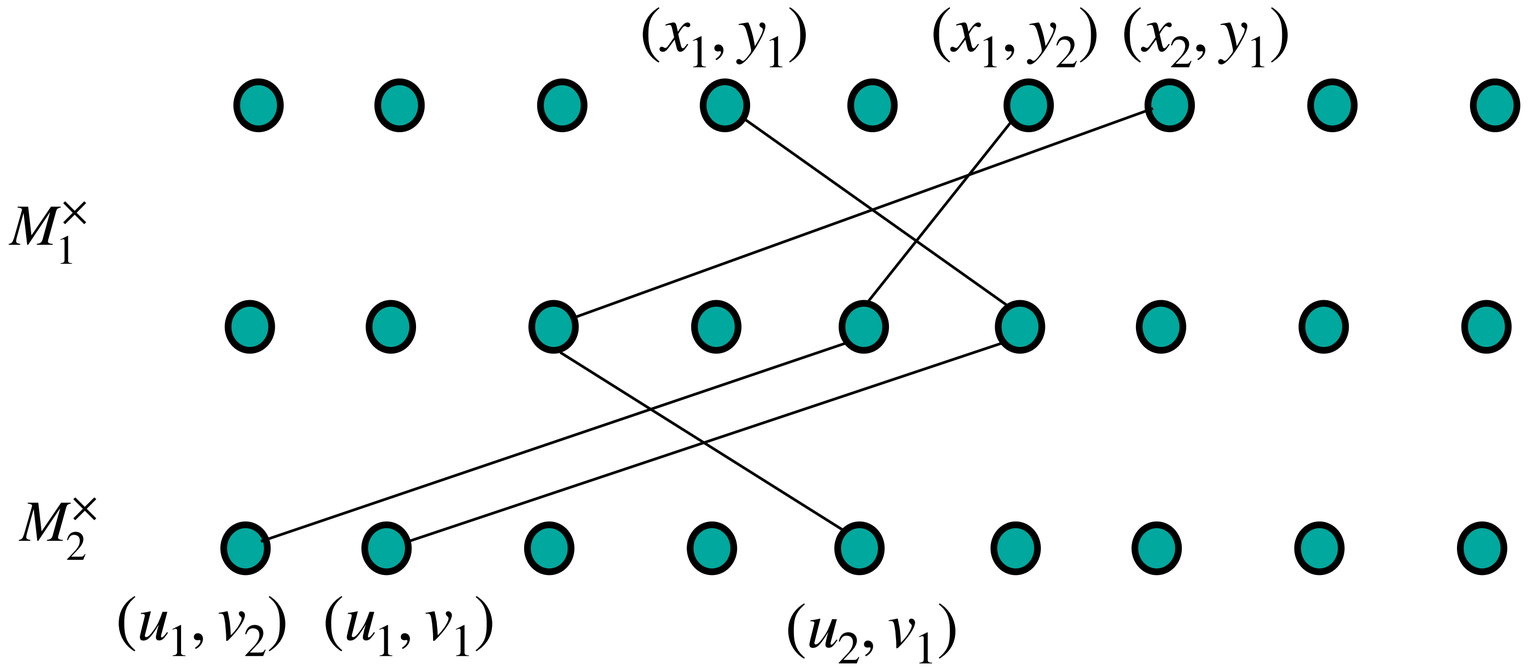

(u, v)
(u, u_2)
(u, v_2)
(v_1, v_2)
Alice
Bob
(x, x)
(x, y)
(x, z)
(y, y)
(z, z)

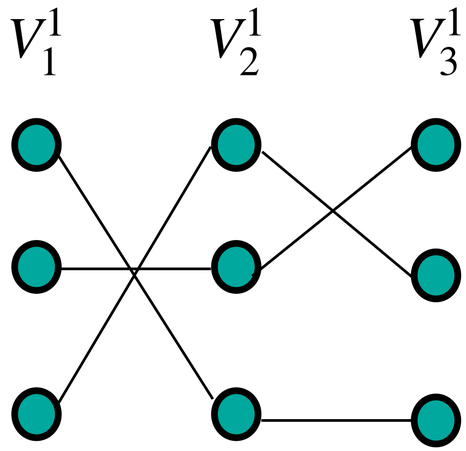

(u, v)
Alice
Bob
(x, x)
(y, y)
(w_1, w_2)
(w_3, w_4)

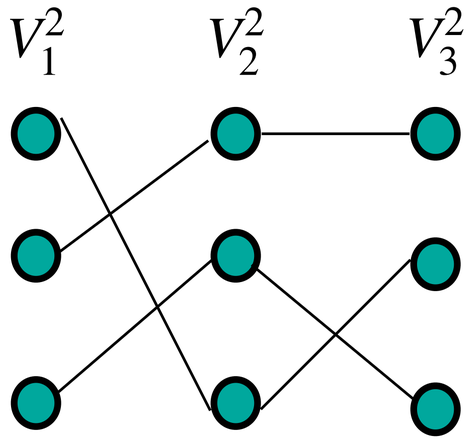

u
v
y
x

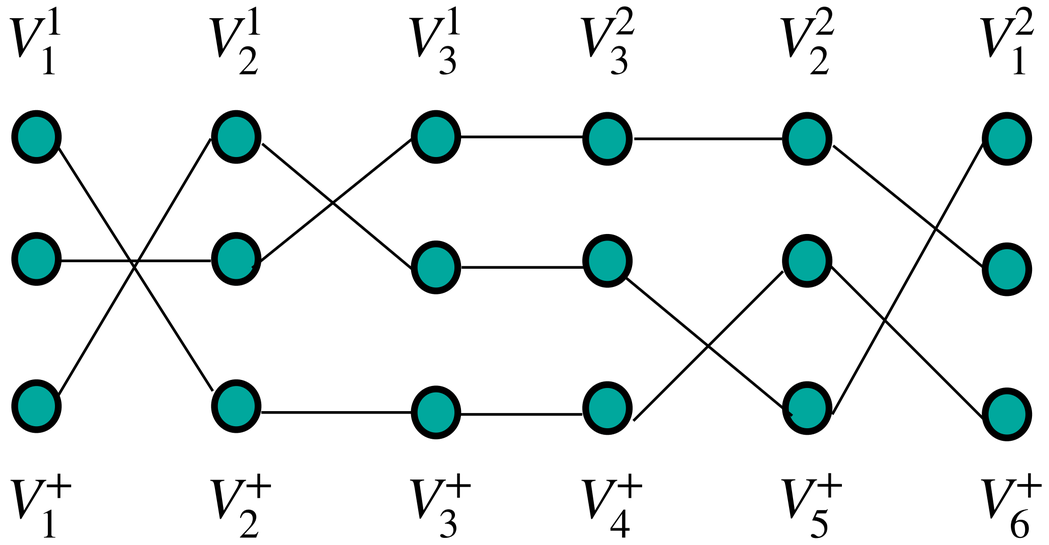

u_1
u_2
x_1
x_2
M_1^1
M_2^1


y_1
y_2
v_2
v_1
M_1^2
M_2^2


(x_1, y_1)
(x_1, y_2)
(x_2, y_1)
$M_1^{\times}$
$M_2^{\times}$
(u_1, v_2)
(u_1, v_1)
(u_2, v_1)


V_1^1
V_2^1
V_3^1


V_1^2
V_2^2
V_3^2


V_1^1
V_2^1
V_3^1
V_3^2
V_2^2
V_1^2
V_1^+
V_2^+
V_3^+
V_4^+
V_5^+
V_6^+