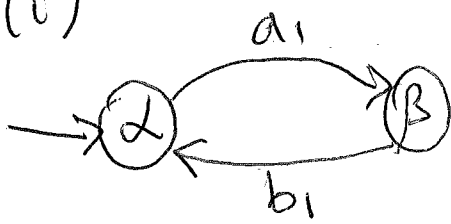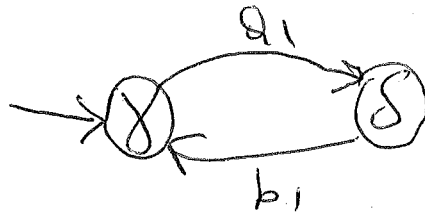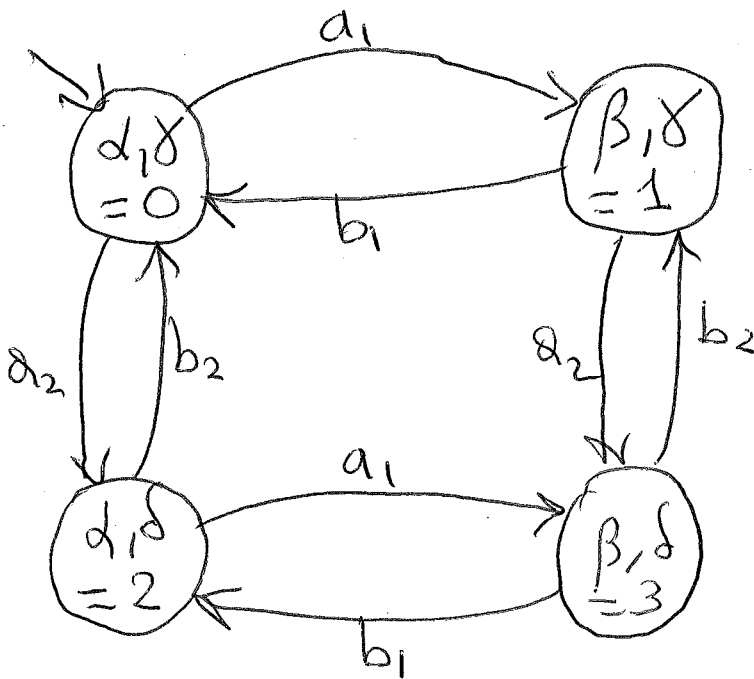27/2/2017   SED

1. (a) (i)

$$L(G_1) = \overline{(a_1 b_1)^*}$$
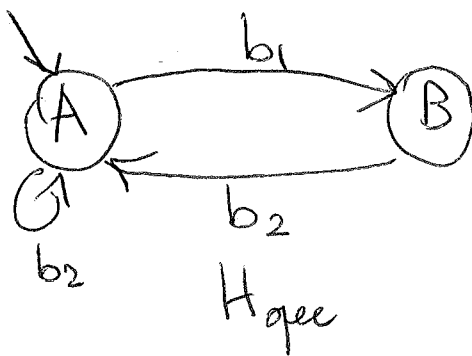
$$L(G_2) = \overline{(a_2 b_2)^*}$$

(ii)

$$G = G_1 \| G_2$$

(b)

H_{qee}
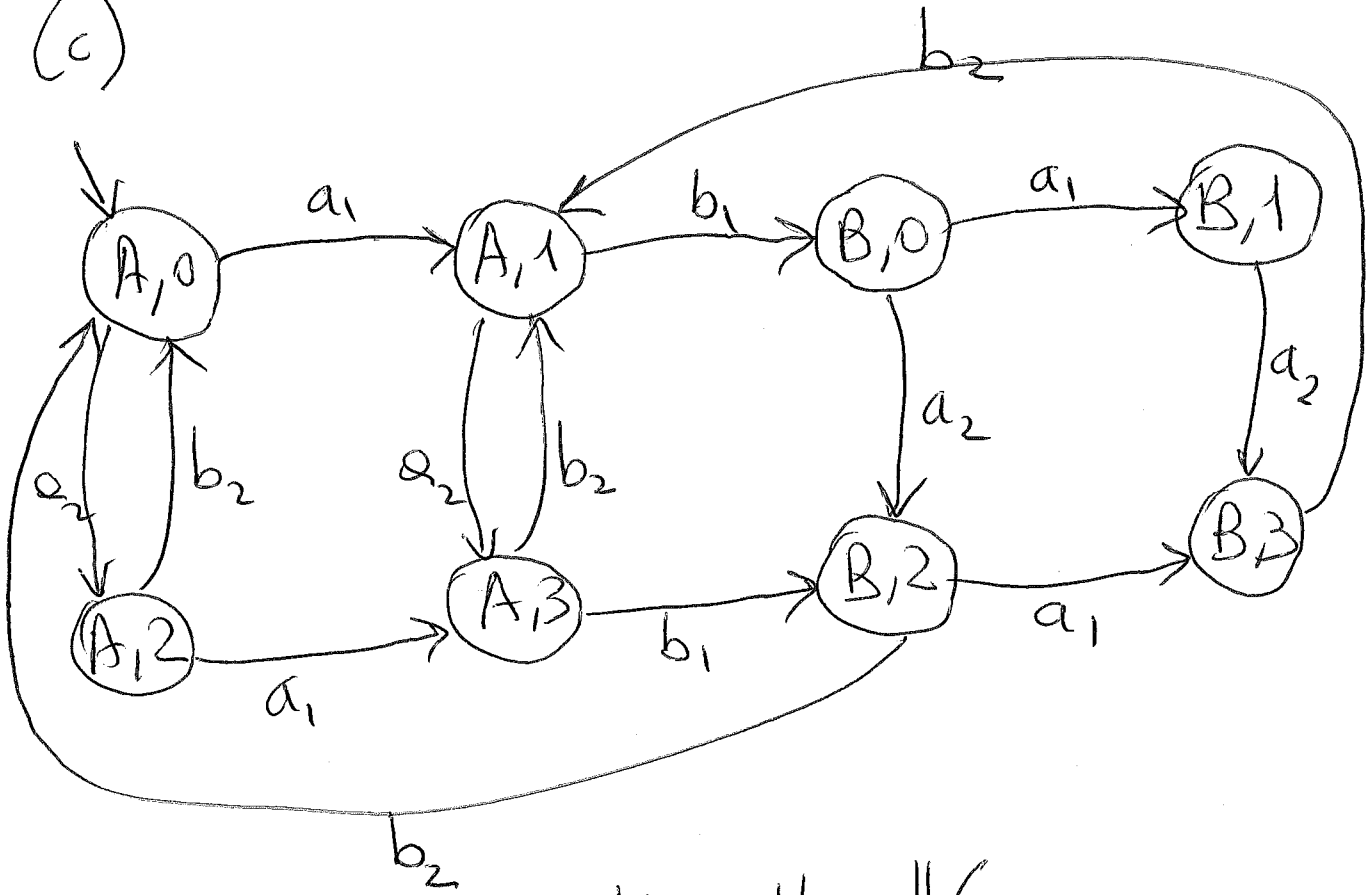
$$E = \{b_1, b_2\}$$

$$K = L(H_{qee}) = \overline{(b_2^* b_1 b_2)^*}$$

(c)

$H = H_{spec} \| G$

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1. (e)

(i) H (già costruito) genera $\overline{K}$
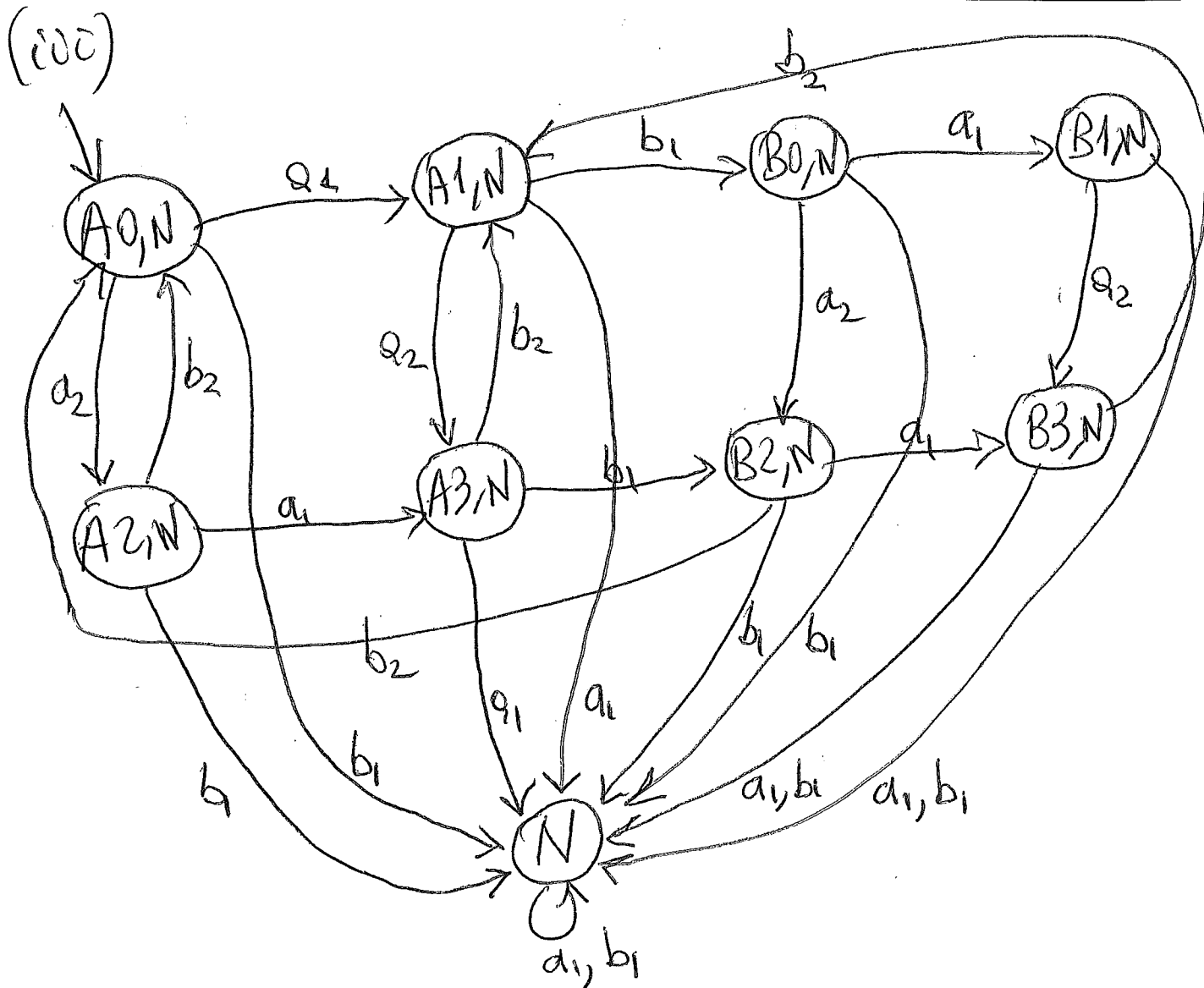
(ii)

genera il linguaggio E_{uc}^*

(iii)
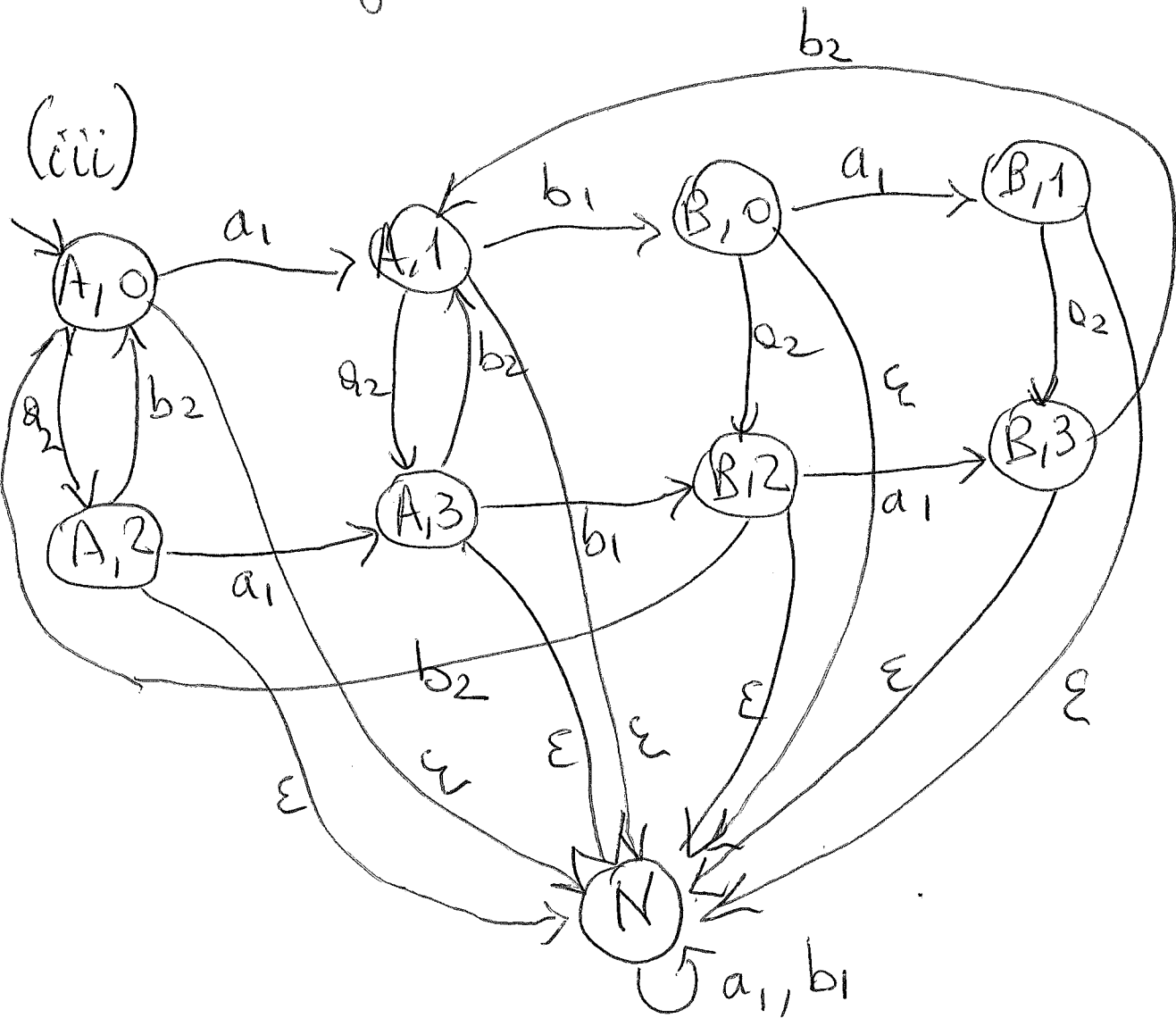
non-deterministico
genera $\overline{K} E_{uc}^*$

(iii)

Haug deterministic
genere $\overline{K} E_{\cup c}^{*}$

(iv)

Haus × G

genere $\overline{KE_{\omega} \cap H} = K^{\wedge \iota}$

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2.

Petri net diagram with places p_1, p_2, p_3 and transitions t_1, t_2, t_3, with arc weight 2.

$$[1,0,1]$$
$$\downarrow t_3$$
$$[1,1,0]$$
$$\downarrow t_2$$
$$[1,0,1]$$
dup

$[2,1,1]$

$\swarrow t_1 \quad \downarrow t_2 \quad \xrightarrow{t_3}$ Alter zufg.

$[0,1,2] \quad [2,0,2] \quad [2,2,0]$

$\downarrow t_2 \qquad \downarrow t_3 \qquad \swarrow t_1 \qquad \searrow t_2$

$[0,0,3] \quad [2,1,1] \quad [0,2,1] \quad [2,1,1]$

$\underline{\underline{}} \qquad\quad$ DUP $\qquad \downarrow t_2 \qquad$ DUP

$[0,1,2]$

DUP

Großzufg.

$[2,1,1] \quad\; t_2$

$\swarrow t_1 \quad \downarrow t_2 \;)t_3 \quad \underset{}{t_3}$

$[0,1,2] \quad [2,0,2] \quad [2,2,0]$

$t_2 \downarrow \qquad \searrow t_2 \qquad \downarrow t_1$

$[0,0,3] \qquad\qquad [0,2,1]$

$\underline{\underline{}}$