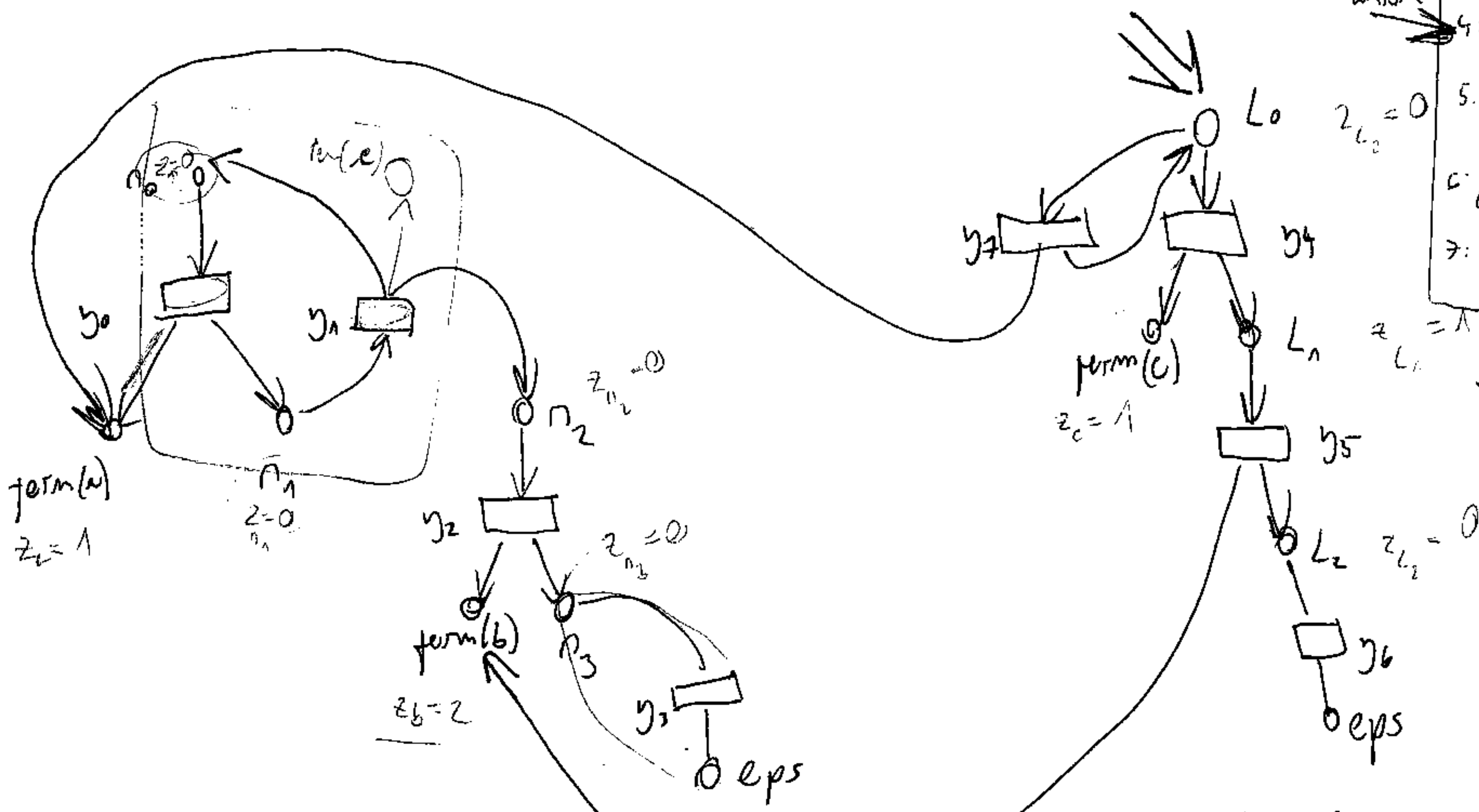


axiom

4: $L_0 \to c\, L_1$

5: $L_1 \to b\, L_2$

6: $L_2 \to \varepsilon$

7: $L_0 \to a\, L_0$

$n_0 \to a\, n_1$

$n_1 \to n_0\, n_2$

$n_2 \to b\, n_3$

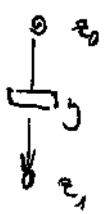
$n_3 \to \varepsilon$

$z>0 \iff y_1>0$

$z>0 \iff z_1>e$

$z>0 \iff y_1+y_2>0.$

$z_0=1$ (z_0 je axiom)



$y \Rightarrow z_0$

$z_0 \,\&\, y \Rightarrow z_1$

FIX

~~$y_a=0 \vee z_a>0$~~

~~$y_b=0 \vee z_b>0$~~

~~$y_c=0 \vee z_c$~~

~~$y_p=0 \vee z_Y=0$~~

$A \Rightarrow B$

$\neg A \vee B$

T $1 + y_7 - y_4 - y_7 = 0$

T $y_4 - y_5 = 0$

T $y_5 - y_c = 0$

T $y_1 - y_0 = 0$

T $y_0 - y_1 = 0$

T $y_1 - y_2 = 0$

T $y_2 - y_3 = 0$

T $x_a = y_0 + y_7 = 2$

T $x_b = y_2 + y_5 = 2$

T $x_c = y_4 = 1$

F $x_a = 0 \lor z_a > 0$ T

F $x_b = 0 \lor z_b > 0$ T

F $x_c = 0 \lor z_c > 0$ T

$\boxed{y = 1}$

$y_0 = 1$

$z_{L_0} = 0$

$z_{L_1} = 1$

$z_{L_2} = 0$

$z_{n_3} = 0$

$z_a = 1 \quad z_b = 2 \quad z_c = 1$

F $(z_a = z_{n_0} + 1 \land y_0 > 0 \land z_{n_0} > 0) \lor (z_a = 1 \land y_7 > 0) \Leftrightarrow z_a \geq 0$

F $(z_b = z_{n_2} + 1 \land y_2 > 0 \land z_{n_2} > 0) \lor (z_b = z_{L_1} + 1 \land y_5 > 0 \land z_{L_1} > 0) \Leftrightarrow z_b \geq 0$

T $(z_c = 1 \land y_4 > 0) \Leftrightarrow z_c \geq 0$

$z_{L_0} = 0$

F $(z_{L_0} = 1 \land y_7 > 0) \Leftrightarrow z_{L_0} \geq 0$

T $(z_{L_1} = 1 \land y_4 > 0) \Leftrightarrow z_{L_1} \geq 0$

$(z_{L_2} = z_{L_1} + 1 \land y_5 > 0 \land z_{L_1} > 0) \Leftrightarrow z_{L_2} \geq 0$ F

$(z_{n_0} = z_{n_1} + 1 \land y_1 > 0 \land z_{n_1} > 0) \Leftrightarrow z_{n_0} \geq 0$ F

$(z_{n_1} = z_{n_0} + 1 \land y_0 > 0 \land z_{n_0} > 0) \Leftrightarrow z_{n_1} \geq 0$ F

$(z_{n_2} = z_{n_1} + 1 \land y_1 > 0 \land z_{n_1} > 0) \Leftrightarrow z_{n_2} \geq 0$ F

$(z_{n_3} = z_{n_2} + 1 \land y_2 > 0 \land z_{n_2} > 0) \Leftrightarrow z_{n_3} \geq 0$ F

$(\ldots \land \sum y_{\cdot n} > 0) \Leftrightarrow z_n > 0$

$z_n > 0 \rightarrow \exists n' \in {}^\circ n \cup n^\circ : (y_{n,n'} > 0 \lor y_{n',n} > 0)$

$\land\ z_n > z_{n'} \geq 0 \Rightarrow$ source $z \geq 0$

$\boxed{1 - u_{n'}}$

if $n \neq L_0$.

$u_n = 0 \quad u_{L_0} = 1$

$\sum y_2 > 0 \Leftrightarrow z_{n_2} > 0$

For each non-terminal A

$$M_G(A) + \sum_{p \in P} A(p)\, y_p - \sum_{i=1}^{k} y_{p_i} = 0$$

For each terminal A

$$x_A = \sum_{p \in P} A(p)\, y_p$$

Reachability of selected nonterminals

- for each terminal

$$x_A > 0 \Rightarrow z_A > 0 \qquad (B_i \xrightarrow{p_i} \ldots A \ldots)$$

- propagation - for each terminal or non-terminal A

$$z_A > 0 \Rightarrow \bigvee_{i=1}^{L} (z_A = z_{B_i} + 1 \wedge y_{p_i} > 0 \wedge z_{B_i} > 0$$

$$z_A = 1 \wedge y_{p_i} > 0 \quad \text{- for } B_i \text{ initial}$$

NEW

- ~~notation~~ reachability of selected rules

$$y_p > 0 \Rightarrow z_A > 0 \quad \text{for rule } p: A \to ?,$$

A is not an axiom.

$$z_{AXIOM} = 0$$