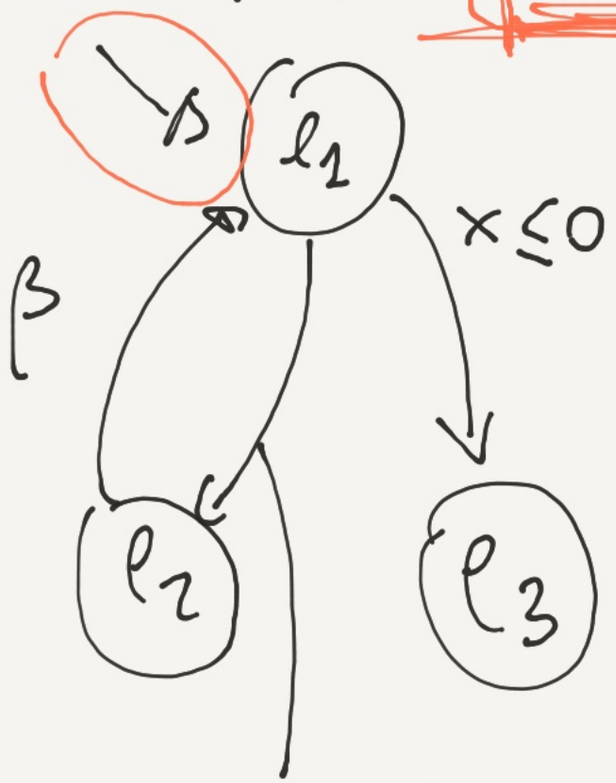
PG P



$g_0 \equiv x = 2 \wedge y = 0$

$\alpha : x := x - 1$

$\beta : y := y + 1$

$Loc = \{l_1, l_2, l_3\}$ $\#Loc = 3$

$Dom(x) = \{0, 1, 2\}$

$Dom(y) = \{0, 1, 2\}$

$\# Dom(x) = 3$

$\# Dom(y) = 3$

$\# Eval(Var) = 3 \cdot 3 = 9$

$T_P = (S, S_0 = \{\langle l_0, [2,0] \rangle\}, \ldots)$

$S = \{(l_1, [0,0]), (l_2, [0,2]), \ldots$
$(l_3, [2,2])\}$

$\# S = 3 \cdot 3 \cdot 3 = 27$

$Eval(Var) = \{$ (x, y)
$[0,0], [1,0], [2,0]$
$[0,1], [1,1], [2,1]$
$[0,2], [1,2], [2,2]$ $\}$

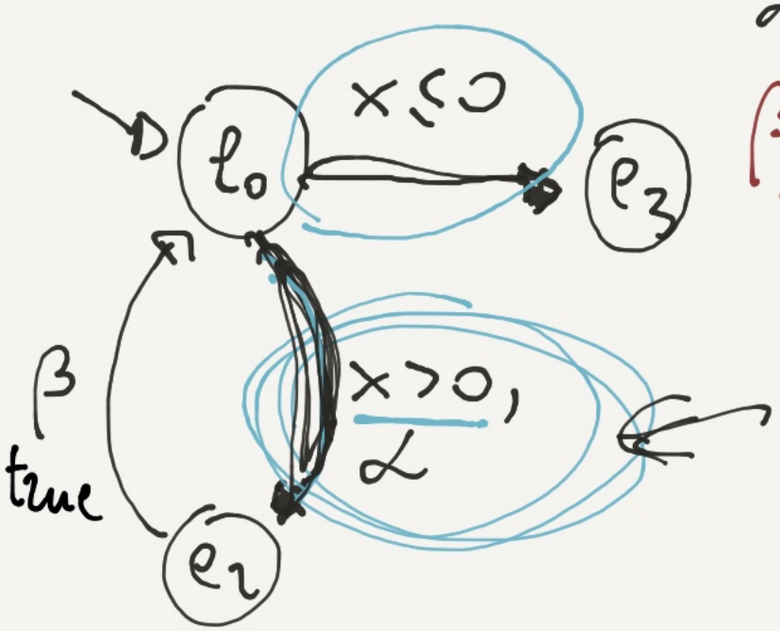
$[2,0] \models g_0$

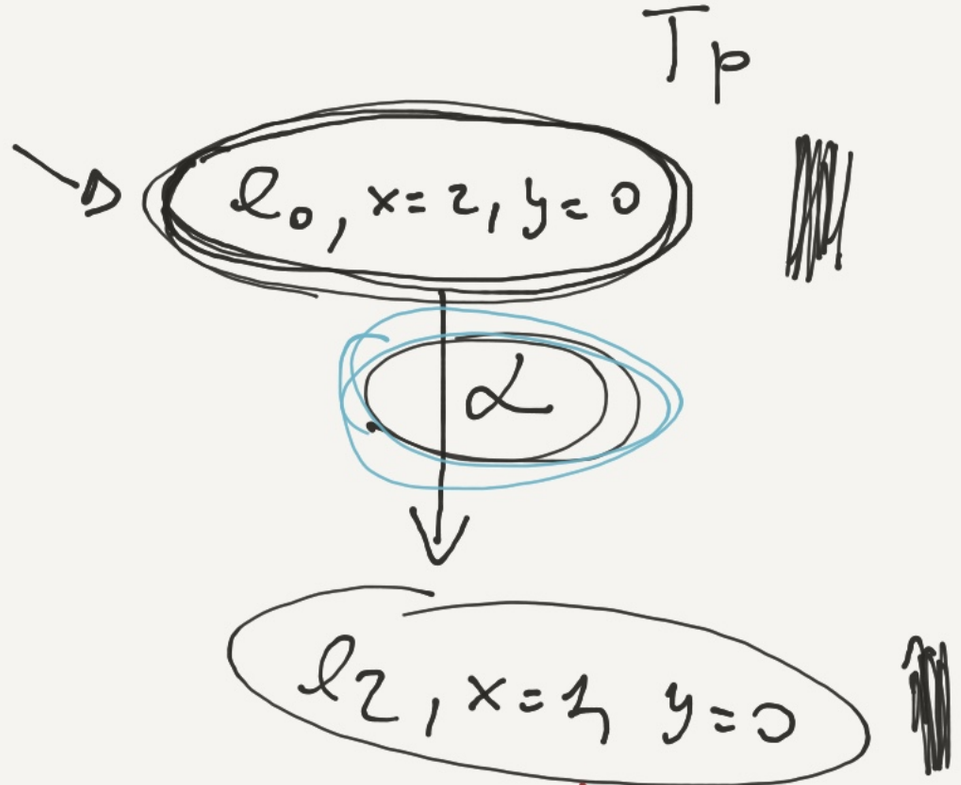
RSV 5/10/17

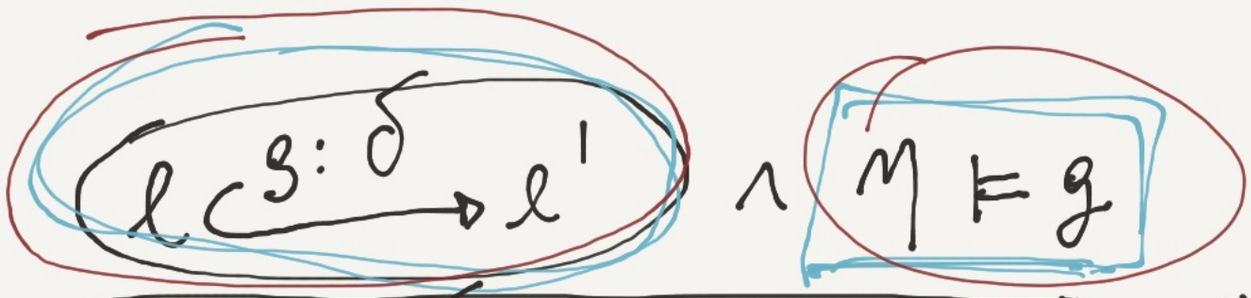
Translation of a PROGRAM GRAPH

α: $x := x - 1$

β: $y := y + 1$







δ

$\langle l, \eta \rangle \xrightarrow{\delta} \langle l', Effect(\delta, \eta) \rangle$ $[q_0] \vdash true$

$l = l_0$ $\delta = \alpha$ $l' = l_2$

$\eta = [2, 0]$

$l = l_2$ $\eta = [1, 0]$

$\delta = \beta$