Correction Annales

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1 Partie 2

1.1 Exercice 5

1.
$$\frac{(D_v, \emptyset, \sigma) \rightarrow_D (\rho_l, \sigma')(S, (\rho^{chap} \bigoplus \rho_l, \sigma') \rightarrow \sigma"}{(begin\, D_v\, Send, \rho^{chap}, \sigma) \rightarrow \sigma"}$$

2.
$$\frac{a_x = New_s()(D_v, \rho_l[x \rightarrow a_x], \sigma[a_x \rightarrow 0]) \rightarrow (\rho'_l, \sigma')}{(int\ x; D_v, p_l, \sigma) \rightarrow (\rho'_l, \sigma')}$$

$$\frac{a_x = New_s()(D_v, \rho_l[x \rightarrow a_x], \sigma[a_x \rightarrow NULL]) \rightarrow (\rho'_l, \sigma')}{(int * x; D_v, p_l, \sigma) \rightarrow (\rho'_l, \sigma'}$$

3.
$$[\tau(x) = \tau(y) = Int]\frac{}{(x := y, \rho^{chap}, \sigma) \rightarrow \sigma[\rho^{chap}(x) \rightarrow \sigma(\rho^{chap}(y))]}$$

4.
$$[\tau(x) = \tau(y) = Int*]\frac{}{(x := y, \rho^{chap}, \sigma) \rightarrow \sigma[\rho^{chap}(x) \rightarrow \sigma(\rho^{chap}(y))]}$$

5.
$$[\tau(x) = int\ \tau(y) = Int*]\frac{}{(x := y, \rho^{chap}, \sigma) \rightarrow \sigma[\rho^{chap}(x) \rightarrow \sigma(\sigma(\rho^{chap}(y)))]}$$

6.
$$[\tau(x) = int*\ \ \tau(y) = Int]\frac{}{(x := y, \rho^{chap}, \sigma) \rightarrow \sigma[\rho^{chap}(x) \rightarrow \rho^{chap}(y)]}$$

1.2 Exercice 6

$$[\tau(x) = Int*]\frac{v = N[n] \qquad l_h = new(v)}{(x = malloc(n), \rho^{chap}, \sigma) \rightarrow (\sigma[\rho^{chap}(x) \rightarrow (l_h, v)])}$$

1.3 Exercice 7

$$\frac{}{(free(x), \rho^{chap}, \sigma) \rightarrow \sigma}$$

1.
$$\frac{\sigma(\rho^{chap}(x)) \in (Adr_h \times N)}{(free(x), \rho^{chap}, \sigma) \to \sigma}$$

2.
$$\frac{\sigma(\rho^{chap}(x)) \in (Adr_h \times N)}{(free(x), \rho^{chap}, \sigma) \to \sigma(\rho^{chap} \to NULL)}$$

2 Partie 3

2.1 Exercice 10

bloc	Pred	Kill	Gen	In	Out	In	Out	In	Out
B1	$\emptyset$	t1,t2	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$
B2	B1,B4	$\emptyset$	$\emptyset$	t1,t2	t1,t2	$\emptyset$	$\emptyset$	$\emptyset$	$\emptyset$
B3	B2	$\emptyset$	t1,t2	t1,t2	t1,t2	t1,t2	t1,t2	$\emptyset$	t1,t2
B4	B3	t1,t2	$\emptyset$	t1,t2	$\emptyset$	t1,t2	$\emptyset$	t1,t2	$\emptyset$
B5	B2	t1,t2	t2	t1,t2	t2	t1,t2	t2	$\emptyset$	t2

B3:
e1=i+j
t1:=e1
t2:=i-j
B4:i:=e1;