Typing

$x : C \,;\, ocap \vdash t : \sigma$

$$\text{Task}\ \frac{\Gamma \,;\, a \vdash b : Q \triangleright Box[C]}{\Gamma \,;\, a \vdash task\ (b)\ \{ x \Rightarrow t \} : Q \triangleright Task[C]}$$

$$\text{Async}\ \frac{\begin{array}{l} Perm[Q] \in \Gamma \\ \Gamma \setminus Perm[Q] \,;\, a \vdash u \\ \Gamma \,;\, a \vdash t : Q \triangleright Task[C] \end{array}}{\Gamma \,;\, a \vdash async\ (t)\ \{\ \ u\ \} : \bot}$$

$$\text{Finish}\ \frac{\begin{array}{l} (\sigma \neq \bot \wedge \sigma = \tau) \vee (\sigma = \bot \wedge \tau = Null) \\ \Gamma \,;\, a \vdash t : \sigma \end{array}}{\Gamma \,;\, a \vdash finish\ \{ t \} : \tau}$$

Evaluation

$$\text{Switch}\ \frac{}{H,\ FS, FS' \cup TS \Rightarrow H,\ FS',\ TS \cup \{FS\}}$$

$$\text{Task}\ \frac{L(b) = b(o, p)}{\begin{array}{l} H, \langle L,\ let\ x = task\ (b)\ \{x \Rightarrow t\}\ in\ y,\ P \rangle^{L},\ TS \\ \rightarrow H, \langle L[x \rightarrow task(b(o,p), t)],\ \ \ y,\ P \rangle^{L},\ TS \end{array}}$$

$$\text{Async}\ \frac{\begin{array}{l} L(x) = task(b(o,p), t) \\ T = \langle [x \rightarrow o],\ t,\ \varnothing \rangle^{\varepsilon} \qquad\qquad p \in P \end{array}}{\begin{array}{l} H, \langle L,\ async\ (x)\ \{\ y\},\ P \rangle^{L} \circ FS,\ TS \\ \rightarrow H, \langle L,\ y,\ P \setminus \{p\} \rangle^{\varepsilon} \circ FS,\ T \cup TS \end{array}}$$

?

Finish $\dfrac{}{H, \langle L, \mathtt{let}\, x = \mathtt{finish}\ \{t\}\ \mathtt{in}\ y, P\rangle^{l} \circ FS, TS \longrightarrow H, \langle L[x \to z], y, P\rangle^{l} \circ FS, TS}$