Long-distance interaction between caller and callee

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$$t := \qquad \qquad \text{term}$$

$$v \qquad \qquad \text{value}$$

$$x \qquad \qquad \text{variable}$$

$$t \qquad t \qquad \text{application}$$

$$v ::= \qquad \qquad \text{value}$$

$$c \qquad \qquad \text{constant}$$

$$\lambda x : \tau \cdot t \quad \text{abstraction}$$

$$\tau ::= \qquad \qquad \text{type}$$

$$\kappa \qquad \qquad \text{type of constants}$$

$$\tau \rightarrow \tau \qquad \text{arrow type}$$

$$\Gamma ::= \qquad \qquad \text{context}$$

$$\varnothing \qquad \qquad \text{empty context}$$

$$\Gamma, x : \tau \qquad \text{variable binding}$$

$$\text{Figure 1: Syntax}$$

$$\frac{\Gamma \vdash t : \tau}{\Gamma \vdash c : \kappa} \quad \text{(T-Constant)}$$

$$\frac{x : \tau \in \Gamma}{\Gamma \vdash x : \tau} \quad \text{(T-Variable)}$$

$$\frac{\Gamma, \ x : \tau_1 \vdash t : \tau_2}{\Gamma \vdash \lambda x : \tau_1 \cdot t : \tau_1 \to \tau_2} \quad \text{(T-Abstraction)}$$

$$\frac{\Gamma \vdash t_1 : \tau_1 \quad \Gamma \vdash t_2 : \tau_1 \to \tau_2}{\Gamma \vdash t_2 : t_1 : \tau_2} \quad \text{(T-Application)}$$
Figure 2: Typing rules

$$\frac{t \longrightarrow t'}{t_1 \ t_2 \longrightarrow t'_1 \ t_2} \text{(E-LeftApp)}$$

$$\frac{t \longrightarrow t'}{v \ t \longrightarrow v \ t'} \text{(E-RightApp)}$$

$$\overline{(\lambda x : \tau \cdot t) \ v \longrightarrow t \ [x \mapsto v]} \text{(E-Beta)}$$
Figure 3: Operational semantics