

msga^{11,40}

MsgA

$$\begin{aligned} \equiv_{\text{def}} \quad & ds:x:\text{Id} \text{ fp} \rightarrow \text{Type} \\ & \times (da:a:\text{Knd} \text{ fp} \rightarrow \text{Type} \\ & \times \text{init}:x:\text{Id} \text{ fp} \rightarrow \mathbb{Q} \rightarrow ds(x)?\text{Void} \\ & \times \text{pre}:a:\text{Id} \text{ fp} \rightarrow \text{State}(ds) \rightarrow \mathbb{B} \\ & \times \text{ef}:kx::\text{Knd} \times \text{Id} \text{ fp} \rightarrow \text{State}(ds) \rightarrow \text{Valtype}(da;kx.1) \rightarrow \mathbb{Q} \rightarrow ds(kx.2)?\text{Void} \\ & \times \text{send}:kl::\text{Knd} \times \text{IdLnk} \text{ fp} \rightarrow \\ & \quad (tg:\text{Id} \times (\text{State}(ds) \rightarrow \text{Valtype}(da;kl.1) \rightarrow (da(\text{rcv}(kl.2,tg))?\text{Void} \text{ List}))) \text{ List} \\ & \times \text{frame}:x:\text{Id} \text{ fp} \rightarrow \text{Knd} \text{ List} \\ & \times \text{sframe}:ltg::\text{IdLnk} \times \text{Id} \text{ fp} \rightarrow \text{Knd} \text{ List} \\ & \times \text{aframe}:k:\text{Knd} \text{ fp} \rightarrow \text{Id} \text{ List} \\ & \times \text{bframe}:k:\text{Knd} \text{ fp} \rightarrow \text{IdLnk} \text{ List} \\ & \times \text{rframe}:x:\text{Id} \text{ fp} \rightarrow \text{Knd} \text{ List} \\ & \times (\text{prob}:a:\text{Id} \text{ fp} \rightarrow \text{FinProbSpace} \\ & \times \text{Top})) \end{aligned}$$

clarification:

msga{i:l}

$$\begin{aligned} \equiv_{\text{def}} \quad & ds:x:\text{Id} \text{ fp} \rightarrow \text{Type}\{i\} \\ & \times (da:a:\text{Knd} \text{ fp} \rightarrow \text{Type}\{i\} \\ & \times \text{init}:x:\text{Id} \text{ fp} \rightarrow \mathbb{Q} \rightarrow \text{fpf-cap}(ds;\text{IdDeq};x;\text{Void}) \\ & \times \text{pre}:a:\text{Id} \text{ fp} \rightarrow \text{State}(ds) \rightarrow \mathbb{B} \\ & \times \text{ef}:kx::\text{Knd} \times \text{Id} \text{ fp} \rightarrow \text{State}(ds) \rightarrow \text{Valtype}(da;kx.1) \rightarrow \mathbb{Q} \rightarrow \text{fpf-cap}(ds;\text{IdDeq};kx.2;\text{Void}) \\ & \times \text{send}:kl::\text{Knd} \times \text{IdLnk} \text{ fp} \rightarrow \\ & \quad (tg:\text{Id} \\ & \quad \times (\text{State}(ds) \rightarrow \text{Valtype}(da;kl.1) \rightarrow \\ & \quad \quad (\text{fpf-cap}(da;\text{KindDeq};\text{rcv}(kl.2,tg);\text{Void}) \text{ List}))) \text{ List} \\ & \times \text{frame}:x:\text{Id} \text{ fp} \rightarrow \text{Knd} \text{ List} \\ & \times \text{sframe}:ltg::\text{IdLnk} \times \text{Id} \text{ fp} \rightarrow \text{Knd} \text{ List} \\ & \times \text{aframe}:k:\text{Knd} \text{ fp} \rightarrow \text{Id} \text{ List} \\ & \times \text{bframe}:k:\text{Knd} \text{ fp} \rightarrow \text{IdLnk} \text{ List} \\ & \times \text{rframe}:x:\text{Id} \text{ fp} \rightarrow \text{Knd} \text{ List} \\ & \times (\text{prob}:a:\text{Id} \text{ fp} \rightarrow \text{FinProbSpace} \\ & \times \text{Top})) \end{aligned}$$