

SOS-rules for asynchronous message passing

PC2.2-29

for channel c with $\text{cap}(c) \geq 1$

receiving a message:

$$\frac{\ell_i \xleftarrow[c?x]{\tau} \ell'_i \wedge \xi(c) = v_1 v_2 \dots v_k \wedge k \geq 1}{\langle \ell_1, \dots, \ell_i, \dots, \ell_n, \eta, \xi \rangle \xrightarrow{\tau} \langle \ell_1, \dots, \ell'_i, \dots, \ell_n, \eta', \xi' \rangle}$$

where $\eta' = \eta[x:=v_1]$ and $\xi' = \xi[c:=v_2 \dots v_k]$

sending a message:

$$\frac{\ell_i \xleftarrow[c!v]{\tau} \ell'_i \wedge \xi(c) = v_1 \dots v_k \wedge k < \text{cap}(c)}{\langle \ell_1, \dots, \ell_i, \dots, \ell_n, \eta, \xi \rangle \xrightarrow{\tau} \langle \ell_1, \dots, \ell'_i, \dots, \ell_n, \eta, \xi[c:=v_1 \dots v_k v] \rangle}$$