MODULE *ABSpec*

EXTENDS *Integers*

CONSTANT *Data*

VARIABLES *AVar*, *BVar*

$$\begin{aligned} \mathit{TypeOK} \triangleq\ & \land\ \mathit{AVar} \in \mathit{Data} \times \{0, 1\} \\ & \land\ \mathit{BVar} \in \mathit{Data} \times \{0, 1\} \end{aligned}$$

$$\mathit{vars} \triangleq \langle \mathit{AVar}, \mathit{BVar} \rangle$$

$$\begin{aligned} \mathit{Init} \triangleq\ & \land\ \mathit{AVar} \in \mathit{Data} \times \{1\} \\ & \land\ \mathit{BVar} = \mathit{AVar} \end{aligned}$$

Send a value from A

$$\begin{aligned} A \triangleq\ & \land\ \mathit{AVar} = \mathit{BVar} \\ & \land\ \exists\, d \quad \in \mathit{Data} : \mathit{AVar}' = \langle d, 1 - \mathit{AVar}[2] \rangle \\ & \land\ \text{UNCHANGED}\ \mathit{BVar} \end{aligned}$$

Receive a value on B

$$\begin{aligned} B \triangleq\ & \land\ \mathit{AVar} \neq \mathit{BVar} \\ & \land\ \mathit{BVar}' = \mathit{AVar} \\ & \land\ \text{UNCHANGED}\ \mathit{AVar} \end{aligned}$$

$$\mathit{Next} \triangleq A \lor B$$

$$\mathit{Spec} \triangleq \mathit{Init} \land \Box[\mathit{Next}]_{\langle \mathit{vars} \rangle}$$

* Modification History
* Last modified Sat *Nov* 16 19:34:13 *CET* 2019 by *martin*
* Created Sat *Nov* 16 19:26:21 *CET* 2019 by *martin*