———————————— MODULE *AsynchInterface* ————————————

EXTENDS *Integers*

CONSTANT *Data*
VARIABLES *val*, *rdy*, *ack*

$TypeInvariant \triangleq \land val \in Data$
$\qquad\qquad\qquad \land rdy \in \{0, 1\}$
$\qquad\qquad\qquad \land ack \in \{0, 1\}$

$Init \triangleq \land val \in Data$
$\qquad\quad \land rdy \in \{0, 1\}$
$\qquad\quad \land ack = rdy$

$Send \triangleq \land rdy = ack$
$\qquad\qquad \land val' \in Data$
$\qquad\qquad \land rdy' = 1 - rdy$
$\qquad\qquad \land$ UNCHANGED *ack*

$Rcv \triangleq \land rdy \neq ack$
$\qquad\quad \land ack' = 1 - ack$
$\qquad\quad \land$ UNCHANGED $\langle val, rdy \rangle$

$Next \triangleq Send \lor Rcv$

$Spec \triangleq Init \land \Box[Next]_{\langle val, rdy, ack \rangle}$

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THEOREM $Spec \Rightarrow \Box TypeInvariant$

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\ * Modification History
\ * Last modified *Fri Feb* 02 09:58:40 *CET* 2018 by *jordy*
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