VARIABLES
 A_msgs,
 network,
 status,
 B_inbox

CONSTANT
 msgs

$vars \triangleq \langle A\_msgs,\ network,\ status,\ B\_inbox \rangle$

$Init \triangleq$
 $\wedge\ A\_msgs = \{\}$
 $\wedge\ network = \{\}$
 $\wedge\ status = \text{"None"}$
 $\wedge\ B\_inbox = \{\}$

$Send(m) \triangleq$
 $\wedge\ m \notin A\_msgs$
 $\wedge\ A\_msgs' = A\_msgs \cup \{m\}$
 $\wedge\ network' = network \cup \{m\}$
 $\wedge\ \text{UNCHANGED}\ \langle status,\ B\_inbox \rangle$

$NetworkDeliver \triangleq$
 $\wedge\ \exists\, e \in network :$
  $\wedge\ B\_inbox' = B\_inbox \cup \{e\}$
  $\wedge\ network' = network \setminus \{e\}$
 $\wedge\ \text{UNCHANGED}\ \langle status,\ A\_msgs \rangle$

$Receive \triangleq$
 $\wedge\ status' = \text{IF}\ B\_inbox = msgs\ \text{THEN}\ \text{"Ok"}\ \text{ELSE}\ \text{"None"}$
 $\wedge\ \text{UNCHANGED}\ \langle network,\ B\_inbox,\ A\_msgs \rangle$

$Steps(m) \triangleq Send(m) \vee NetworkDeliver \vee Receive$

$Next \triangleq\ \vee\ \exists\, m \in msgs : Steps(m)$
   $\vee\ \text{UNCHANGED}\ vars$

$Spec \triangleq Init$
  $\wedge\ \Box[Next]_{vars}$
  $\wedge\ \forall\, m \in msgs : \text{WF}_{vars}(Steps(m))$

$NothingUnexpectedInNetwork \triangleq \forall\, e \in network : e \in A\_msgs$

$EventuallyStatusIsOK \triangleq$
 $\text{LET}\ IsStatusOk \triangleq status = \text{"Ok"}$
 $\text{IN}\quad \Diamond IsStatusOk$