

MODULE <i>Network</i>
EXTENDS <i>Bags, Message</i>
VARIABLES <i>incoming</i> , <i>msg</i> <i>vars</i> $\triangleq \langle incoming, msg \rangle$
CONSTANTS <i>Msg</i> <i>NotMsg</i> $\triangleq \text{CHOOSE } m : m \notin Msg$
<i>NInit</i> \triangleq $\wedge Minit$ $\wedge incoming = [r \in Replica \mapsto EmptyBag]$ $\wedge msg = [r \in Replica \mapsto NotMsg]$ <i>NBroadcast</i> (<i>r</i> , <i>m</i>) \triangleq $\wedge incoming' = [x \in Replica \mapsto$ IF $x = r$ THEN $incoming[x]$ ELSE $incoming[x] \oplus SetToBag(\{m\})]$ $\wedge MBroadcast$ $\wedge \text{UNCHANGED } \langle msg \rangle$ <i>NDeliver</i> (<i>r</i>) \triangleq $\wedge incoming[r] \neq EmptyBag$ $\wedge \exists m \in BagToSet(incoming[r]) :$ $\wedge msg' = [msg \text{ EXCEPT } ![r] = m]$ $\wedge MDeliver(r, m)$ $\wedge \text{UNCHANGED } \langle incoming \rangle$
<i>EmptyChannel</i> \triangleq $incoming = [r \in Replica \mapsto EmptyBag]$
judge if two replicas receive the same set of update operations
\ * Modification History \ * Last modified Tue May 14 11:14:26 CST 2019 by zfwang \ * Last modified Mon May 06 15:30:04 CST 2019 by jywelin \ * Last modified Sun Apr 21 21:44:03 CST 2019 by xhdn \ * Created Mon Mar 25 20:24:02 CST 2019 by jywelin