\land phase = (p1 :> (m1 :> "START" @@ m2 :> "START")) \land delivered = (p1 :> (m1 :> FALSE @@ m2 :> FALSE)) \wedge clock = (p1 :> 0) \land globalTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \land sent = $\{\}$ \land incoming = (p1 :> {}) \land localTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \land phase = (p1 :> (m1 :> "START" @@ m2 :> "START")) \land delivered = (p1 :> (m1 :> FALSE @@ m2 :> FALSE)) \wedge clock = (p1 :> 0) \land globalTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \wedge sent = {m1} \land incoming = (p1 :> {[type |-> "MULTICAST", m |-> m1]}) \land localTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \land phase = (p1 :> (m1 :> "START" @@ m2 :> "START")) \land phase = (p1 :> (m1 :> "PROPOSED" @@ m2 :> "START")) \land delivered = (p1 :> (m1 :> FALSE @ @ m2 :> FALSE)) \land delivered = (p1 :> (m1 :> FALSE @@ m2 :> FALSE)) \wedge clock = (p1 :> 0) \wedge clock = (p1 :> 1) \land globalTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \land globalTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \wedge sent = {m1, m2} \wedge sent = $\{m1\}$ \land incoming = (p1 :> {[p |-> p1, type |-> "PROPOSE", m |-> m1, lts |-> [c |-> 1, p |-> p1]]}) \land incoming = (p1 :> {[type |-> "MULTICAST", m |-> m1], [type |-> "MULTICAST", m |-> m2]}) $\land \text{ localTS} = (p1 :> (m1 :> [c | -> 0, p | -> p1] @@ m2 :> [c | -> 0, p | -> p1]))$ $\land \text{ localTS} = (p1 :> (m1 :> [c \mid -> 1, p \mid -> p1] @@ m2 :> [c \mid -> 0, p \mid -> p1]))$ \land phase = (p1 :> (m1 :> "PROPOSED" @@ m2 :> "START")) \land delivered = (p1 :> (m1 :> FALSE @@ m2 :> FALSE)) \wedge clock = (p1 :> 1) \land phase = (p1 :> (m1 :> "COMMITTED" @@ m2 :> "START")) \land globalTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \land delivered = (p1 :> (m1 :> TRUE @@ m2 :> FALSE)) \wedge sent = {m1, m2} $\land \operatorname{clock} = (p1 :> 1)$ \land incoming = (p1 :> \land globalTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) { [type |-> "MULTICAST", m |-> m2], \wedge sent = {m1} [p | -> p1, \land incoming = (p1 :> {[p |-> p1, type |-> "PROPOSE", m |-> m1, lts |-> [c |-> 1, p |-> p1]]}) type |-> "PROPOSE", $\land \text{ localTS} = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1]))$ $m \rightarrow m1$ Its |-> [c |-> 1, p |-> p1]] \land localTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \land phase = (p1 :> (m1 :> "PROPOSED" @@ m2 :> "PROPOSED")) \land phase = (p1 :> (m1 :> "COMMITTED" @@ m2 :> "START")) \land delivered = (p1 :> (m1 :> FALSE @@ m2 :> FALSE)) \land delivered = (p1 :> (m1 :> TRUE @@ m2 :> FALSE)) \wedge clock = (p1 :> 2) \land clock = (p1 :> 1) \land globalTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \land globalTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \wedge sent = {m1, m2} \wedge sent = {m1, m2} \land incoming = (p1 :> \land incoming = (p1 :> $\{ [p \mid -> p1, type \mid -> "PROPOSE", m \mid -> m1, lts \mid -> [c \mid -> 1, p \mid -> p1] \},$ { [type |-> "MULTICAST", m |-> m2], $[p \mid -> p1,$ $[p \mid -> p1,$ type |-> "PROPOSE", type |-> "PROPOSE", $m \mid -> m2$ $m \mid -> m1$ $lts | -> [c | -> 1, p | -> p1]] \})$ Its |-> [c |-> 2, p |-> p1]] \land localTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 2, p |-> p1])) \land localTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \land phase = (p1 :> (m1 :> "PROPOSED" @@ m2 :> "COMMITTED")) \land phase = (p1 :> (m1 :> "COMMITTED" @@ m2 :> "PROPOSED")) \land delivered = (p1 :> (m1 :> FALSE @@ m2 :> FALSE)) \land delivered = (p1 :> (m1 :> TRUE @@ m2 :> FALSE)) \land clock = (p1 :> 2) \wedge clock = (p1 :> 2) \land globalTS = (p1 :> (m1 :> [c |-> 0, p |-> p1] @@ m2 :> [c |-> 2, p |-> p1])) \land globalTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 0, p |-> p1])) \wedge sent = {m1, m2} \land sent = {m1, m2} \land incoming = (p1 :> \land incoming = (p1 :> $\{ [p \mid -> p1, type \mid -> "PROPOSE", m \mid -> m1, lts \mid -> [c \mid -> 1, p \mid -> p1] \}, \}$ { [p |-> p1, type |-> "PROPOSE", m |-> m1, lts |-> [c |-> 1, p |-> p1]], [p | -> p1, $[p \mid -> p1,$ type |-> "PROPOSE", type |-> "PROPOSE", $m \mid -> m2$, $m \mid -> m2$ Its |-> [c |-> 2, p |-> p1]]Its |-> [c |-> 2, p |-> p1]] \land localTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 2, p |-> p1])) $\land \text{ localTS} = (p1 :> (m1 :> [c \mid -> 1, p \mid -> p1] @@ m2 :> [c \mid -> 2, p \mid -> p1]))$ \land phase = (p1 :> (m1 :> "COMMITTED" @@ m2 :> "COMMITTED")) \land delivered = (p1 :> (m1 :> TRUE @@ m2 :> TRUE)) \wedge clock = (p1 :> 2) \land globalTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 2, p |-> p1])) \land sent = {m1, m2} \land incoming = (p1 :> $\{ [p \mid -> p1, type \mid -> "PROPOSE", m \mid -> m1, lts \mid -> [c \mid -> 1, p \mid -> p1] \}, \}$ $[p \mid -> p1,$ type |-> "PROPOSE", $m \mid -> m2$, Its |-> [c |-> 2, p |-> p1]] \land localTS = (p1 :> (m1 :> [c |-> 1, p |-> p1] @@ m2 :> [c |-> 2, p |-> p1]))

Next State Actions

Deliver

Propose